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ABSTRACT

This report analyzes options for modifying the current provisions for allocating Chapter 1 funds to better meet the program's goals. The report is organized in seven sections. Following an executive summary and introductory remarks in section 1, section 2 analyzes the existing Chapter 1 funds allocation formulas. Section 3 analyzes the targeting of the Chapter 1 program, including the consequences of current formula provisions on the distribution of funds among schools, school districts, and counties; and the potential effects of selected formula alternatives designed to improve targeting. Section 4 analyzes demographic shifts in poverty among school-age children and youth from one decennial census to another and the resulting impact on the distribution of Chapter 1 funds among counties and states. Section 5 discusses the rationale for adjusting Chapter 1 allocations for interstate differences in costs, the redistributive effects of the current cost adjustment, the accuracy of the current per-pupil expenditure factor as a proxy for the cost of education, and the effects of substituting alternative cost proxies on the distribution of Chapter 1 funds among states and counties. Section 6 discusses the rationale for adjusting Chapter 1 allocations for interstate differences in fiscal capacity and fiscal effort, and examines the redistributive effects of doing so. Section 7 addresses Chapter 1 comparability requirements. Sixty-one exhibits illustrate the discussion. Three appendixes present tables of Chapter 1 funding and allocation data about 10 counties with the highest concentrations of poor children, the 10 largest school districts, and number threshold versus percentage threshold statistics. (Contains 36 references.) (GLR)

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ED 362 614

# Targeting, Formula, and Resource Allocation Issues: Focusing Federal Funds Where the Needs Are Greatest

## A Supplemental Volume to the National Assessment of the Chapter 1 Program

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# *Targeting, Formula, and Resource Allocation Issues: Focusing Federal Funds Where the Needs Are Greatest*

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*A Supplemental Volume to the National Assessment of the Chapter 1 Program*

**U. S. Department of Education**

# Targeting, Formula, and Resource Allocation Issues:

## Focusing Federal Funds Where the Needs Are Greatest

## A Supplemental Volume to the National Assessment of the Chapter 1 Program

1993

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The views expressed in this report developed under contract to the U.S. Department of Education do not necessarily reflect the position or policy of the Department, and no official endorsement by the Department should be inferred.

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# *Executive Summary*

The federal Chapter 1 program provides financial assistance to school districts to expand and improve instructional programs to meet the needs of educationally disadvantaged children. This report analyzes options for modifying the current provisions for allocating Chapter 1 funds to better meet the program's goals. Specifically, the report examines the premises underlying each option and, where data are available, shows how each option would affect the distribution of FY 1993 Chapter 1 funds among states and among counties with different concentrations of poverty.

This report focuses on the targeting of funds to the highest-poverty communities. Under current program provisions, Chapter 1 funds go to almost all counties, to 93 percent of school districts, and to 71 percent of public elementary schools. Spreading Chapter 1 resources across the vast majority of school systems and schools diffuses the program's potential impact and limits its capacity to concentrate resources on the neediest schools. Moreover, some high-poverty schools are going unserved even though many low-poverty schools participate. Chapter 1 services are not provided in 14 percent of elementary schools in which more than 50 percent of students are eligible for subsidized school lunches, yet services are provided in almost half of the elementary schools with fewer than 10 percent of students eligible for subsidized lunches. As a result, many low-achieving children in high-poverty schools do not receive Chapter 1 services. In schools where more than 75 percent of students are eligible for subsidized school lunches, one-third of the children scoring below the 35th percentile are going unserved.

Although the current formula generally allocates funds in proportion to each county's number of poor children, it does not direct greater support per poor child to high-poverty areas. A growing body of research evidence has found a strong link between concentrated poverty and educational disadvantage; for example, the Prospects longitudinal study of Chapter 1 (Abt Associates, 1993) found that students' higher-order thinking skills declined as school poverty increased. These findings suggests that Chapter 1 should be more heavily targeted to schools and communities with the greatest concentration of poor children.

This report presents information on the following topics:

- The current formula for allocation of Chapter 1 funds;
- Alternatives for increasing the targeting of Chapter 1 funds to the highest-poverty communities;
- Alternatives for improving the timeliness of poverty data used to allocate Chapter 1 funds;
- Alternatives to the current adjustment for interstate differences in the cost of education; and
- Potential adjustments to the Chapter 1 formula for differences in fiscal capacity and fiscal effort.

The report also presents information on total educational resources available in high- and low-poverty schools and discusses the extent to which Chapter 1 supplements an equal base of state and local resources. A basic rationale for Chapter 1 is that it improves the opportunities of disadvantaged children by supplementing their regular educational program. However, if Chapter 1 simply buys services in poor school districts that wealthy

school districts routinely provide to all students, its ability to break the link between poverty and achievement and to narrow the gap between the haves and have-nots is limited.

To examine the redistributive effects of formula alternatives, the report presents simulated FY 1993 allocations under each option for states, for the counties containing the 10 largest school districts, for the nation's 10 poorest counties, and for county poverty quartiles (with counties ranked by poverty and grouped into quartiles containing one-fourth of the nation's school-age children in 1990). The highest poverty quartile contains 45 percent of the nation's poor children ages 5-17, the second-highest quartile contains 26 percent, the second-lowest contains 19 percent, and the lowest contains 10 percent.

To show the full impact of each formula alternative, this report did not include the current 85 percent hold-harmless provision in the simulations. If any of these formula options were adopted, the hold-harmless provision would phase in major redistributive effects over a number of years. Puerto Rico's allocation was held constant from FY 1992. All other current formula provisions were retained. To compare the formula alternatives with the current law while holding all other factors constant, we also calculated allocations under the current formula using these two assumptions.

Exhibit E-1 summarizes the effects of each formula option examined in this report on the distribution of funds among county poverty quartiles and among states.

## Exhibit E-1

## Effects of Formula Options on the Distribution of Chapter 1 Funds

| | Counties | | | | | States | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts | Number of States Gaining | Maximum Gain | Number of States Losing | Maximum Loss |
| Poverty rate for children ages 5-17 | 21.5% or more | 15.7% to 21.5% | 10.7% to 15.7% | 10.7% or less | | | | | |
| Children ages 5-17 | 25% | 25% | 25% | 25% | 13% | | | | |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% | | | | |
| Current formula using 1990 Census | | | | | | | | | |
| Basic Grants | 42% | 26% | 20% | 12% | 19% | | | | |
| Concentration Grants | 52% | 32% | 14% | 2% | 23% | | | | |
| Total grants | 43% | 26% | 20% | 11% | 19% | | | | |
| TARGETING OPTIONS | | | | | | | | | |
| Raise Concentration Grant share to: | | | | | | | | | |
| 20% | 44% | 27% | 19% | 10% | 20% | 25 | 4% | 26 | -6% |
| 30% | 45% | 28% | 18% | 9% | 20% | 25 | 5% | 26 | -15% |
| 50% | 47% | 29% | 17% | 7% | 21% | 22 | 11% | 29 | -38% |
| 75% | 50% | 31% | 15% | 4% | 22% | 22 | 17% | 29 | -68% |
| Raise Concentration Grant percent threshold to: | | | | | | | | | |
| 18% | 44% | 26% | 19% | 11% | 19% | 25 | 2% | 26 | -4% |
| 25% | 45% | 25% | 19% | 11% | 20% | 22 | 4% | 29 | -6% |
| Raise Concentration Grant threshold and share: | | | | | | | | | |
| 18% threshold, 50% share | 50% | 28% | 15% | 7% | 22% | 19 | 18% | 32 | -38% |
| 25% threshold, 35% share | 50% | 24% | 17% | 9% | 23% | 13 | 19% | 38 | -26% |
| Apply consistent treatment of percent and number thresholds for Concentration Grants: | | | | | | | | | |
| Count all students | 43% | 26% | 20% | 11% | 19% | 24 | 6% | 27 | -1% |
| Count students in excess of thresholds | 44% | 26% | 20% | 11% | 20% | 28 | 10% | 23 | -6% |

## Exhibit E-1 (Continued)

## Effects of Formula Options on the Distribution of Chapter 1 Funds

| | Counties | | | | | States | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts | Number of States Gaining | Maximum Gain | Number of States Losing | Maximum Loss |
| Absorption formula with: | | | | | | | | | |
| 2% threshold | 44% | 26% | 20% | 10% | 19% | 23 | 4% | 28 | -5% |
| 4% threshold | 47% | 26% | 19% | 8% | 20% | 21 | 11% | 30 | -16% |
| 6% threshold | 50% | 27% | 18% | 5% | 21% | 19 | 20% | 32 | -31% |
| Weighted-pupil formula with: | | | | | | | | | |
| 6% threshold/½ pupil weight | 46% | 26% | 20% | 9% | 20% | 19 | 7% | 32 | -9% |
| 10% threshold/½ pupil weight | 48% | 26% | 18% | 8% | 20% | 18 | 13% | 33 | -20% |
| 16% threshold/½ pupil weight | 49% | 24% | 17% | 10% | 21% | 17 | 19% | 34 | -15% |
| 18% threshold/½ pupil weight | 49% | 23% | 17% | 10% | 20% | 18 | 20% | 33 | -16% |
| ALTERNATIVE POVERTY MEASURES | | | | | | | | | |
| Adjusted enrollment | 43% | 27% | 20% | 10% | 19% | 25 | 47% | 26 | -21% |
| Free lunch counts | 43% | 26% | 20% | 11% | 20% | 20 | 32% | 31 | -26% |
| COST-OF-EDUCATION ADJUSTMENTS | | | | | | | | | |
| Eliminate cost factor | 44% | 27% | 19% | 10% | 18% | 31 | 19% | 20 | -21% |
| Current cost factor with 90%-110% boundary | 44% | 27% | 19% | 10% | 18% | 23 | 11% | 28 | -10% |
| Teacher salary index | 43% | 27% | 20% | 11% | 20% | 19 | 33% | 32 | -21% |
| General wage index | 43% | 27% | 19% | 10% | 20% | 18 | 25% | 33 | -26% |
| FISCAL CAPACITY | | | | | | | | | |
| State average per-pupil income | 46% | 27% | 17% | 9% | 15% | 28 | 114% | 23 | -53% |
| FISCAL EFFORT | | | | | | | | | |
| State education revenue/fiscal capacity | 44% | 27% | 19% | 10% | 17% | 31 | 47% | 20 | -35% |

## *The Current Chapter 1 Funding Formula*

Chapter 1 allocations are based primarily on numbers of poor children ages 5-17 identified in the decennial census, with an adjustment using a state average per-pupil expenditure factor that is intended to recognize differences in purchasing power across states. Chapter 1 funds are allocated through two funding authorities: Basic Grants, which distributed 89 percent of the funds in FY 1993, and Concentration Grants, which provide additional Chapter 1 funds to counties and school districts with high numbers or percentages of poor children.

The federal government allocates Chapter 1 funds to the county level. States then suballocate the funds to school districts in accordance with the number of children from low-income families in each district, using the census, participation in the free or reduced-price lunch program, or other data on children from low-income families. When school districts receive their Chapter 1 allocations from the states, they combine Basic and Concentration Grants, using the two funding streams as one. Within the school district, a school is eligible for the Chapter 1 program if its attendance area has a poverty rate that is relatively high for that district.

In general, districts select the schools that rank highest in poverty (typically based on data from the subsidized school lunch or Aid to Families with Dependent Children [AFDC] programs), but the law allows districts several alternatives to a strict ranking. Among them are the grade- span option, the "no wide variance" option, the 25 percent option, and the "grandfather" option.

The allocation of funds among eligible schools is based on the number and needs of low-achieving students rather than on the number of poor children. The main provisions for allocating Chapter 1 funds from the federal government to the schoolhouse door were not altered in the 1988 Amendments to the Elementary and Secondary Education Act.

## *Targeting Chapter 1 Funds on the Highest-Poverty Communities*

### *County and District Targeting Options*

Although Chapter 1 aims to direct funds to high-poverty schools and districts, federal allocations are currently made to the county level for distribution to school districts by the states. One way to improve targeting on high-poverty districts and schools is to direct a greater share of funds to high-poverty counties.

Overall, Chapter 1 grants to local educational agencies (LEAs) are moderately well targeted to high-poverty counties. Funds are generally allocated in proportion to each county's number of poor children, but the formulas do not direct greater amounts per poor child to high-poverty areas — those with the greatest educational needs. In fact, the highest-poverty quartile of counties contain 45 percent of the nation's poor children but receive only 43 percent of the Chapter 1 funds (see exhibit E-1). Although Concentration Grants are somewhat more targeted to high-poverty counties than Basic Grants, they

have little impact on the overall targeting of funds because they represent only a small percentage of total Chapter 1 funds.

Several options are available to achieve roughly the same degree of targeting on high-poverty counties. For example, a goal of targeting half of all Chapter 1 funds to the counties in the highest poverty quartile could be achieved (or nearly achieved) in four different ways:

1. **Increasing the share of funds allocated through the existing Concentration Grant provision.** This option would strengthen targeting by working within the existing law. To reach the goal of targeting 50 percent of all Chapter 1 funds to the highest poverty quartile, it would be necessary to allocate 75 percent of all funds through the Concentration Grant provision. Small increases in the Concentration Grant share (e.g., from 11 percent to 20 percent of appropriations) would have a minimal effect.

2. **Targeting Concentration Grants more intensively on high-poverty counties while raising the share of funds allocated through Concentration Grants.** Raising the eligibility threshold from 15 percent poverty to 18 percent (the national poverty rate for school-age children) while raising the Concentration Grant share to 50 percent would achieve the goal of targeting half of the funds to the counties with the highest poverty. This approach would eliminate 1,435 counties from the Concentration Grant formula, but these counties would still receive Basic Grants.

3. **Requiring communities to absorb the costs of serving the special needs of a certain percent of their poor children.** This "absorption formula" could replace the current dual formula of Basic and Concentration Grants with a simpler, more strongly targeted formula by counting only those children in excess of a specified poverty rate. Poor counties would receive more funds because they would have a greater portion of the children remaining in the formula. Under this approach, a 50 percent targeting goal could be achieved with a 6 percent absorption rate; 103 counties (containing 1 percent of the children eligible under the current formula) would be eliminated from the program.

4. **Allocating funds through a weighted formula that gives more weight to students above a specified poverty threshold.** This option could direct a greater proportion of funding to counties with higher poverty rates while producing

a less severe impact on low-poverty counties than the other options presented. No counties would be eliminated from Chapter 1. Instead of requiring communities with low poverty rates to absorb all costs of serving a certain percentage of their poor children, this approach would require them to shoulder a greater share of the cost for these students, thus shifting part of available funds to the neediest communities. This approach could approximate the 50 percent targeting goal by fully counting students above a 18 percent poverty threshold and weighting students below the threshold by one-half.

These options would substantially redistribute Chapter 1 funds among the states. In general, options designed to increase funding to poor counties tend to shift Chapter 1 funds from northeastern and midwestern states to southern and western states.

## *School Targeting Options*

Targeting on the highest-poverty schools could also be increased by changing the school eligibility and funding provisions. Three options that are available are as follows:

1. **Requiring districts to allocate funds to schools solely on the basis of poverty.** Currently, within school districts, schools become eligible for funds on the basis of poverty, but actual allocations are based on low achievement. As a result, schools face a perverse incentive: if student achievement improves, they may lose funds. This option would avoid this disincentive by basing school allocations solely on poverty.

2. **Replacing the current multistage targeting process with direct state allocations to schools using data from the subsidized school lunch program.** This option is intended to address the problem that some high-poverty schools in poor districts go unserved while lower-poverty schools in more affluent school districts receive Chapter 1 services. Schools would be eligible only if their poverty rate was above the state or national average, and states would allocate funds directly to eligible schools in proportion to each school's number of poor children. The federal government would allocate funds to states using census poverty data. In addition to directing more funds to higher-poverty schools, this option would permit use of more current poverty data and eliminate the disincentive that results from basing school allocations on low achievement.

3. **Serving only those schools above the state or national poverty average.** This option would reduce the number of eligible schools, as in the previous option, but would retain current mechanisms for allocating funds to districts. However, this alternative for Chapter 1's school eligibility provisions may be incompatible with current funding provisions that distribute funds to 93 percent of all school districts, because some states would have many districts receiving Chapter 1 funds but no eligible schools.

Changing targeting at the school level may require greater reliance on data from the free and reduced-price school lunch program — in many cases the only data on low-income children that are available at the school level. These data differ significantly from census poverty data in two ways:

1. The school lunch program uses a looser definition of poverty — 130 percent of the poverty line for free lunches and 185 percent of poverty for reduced-price lunches — so using this measure could weaken targeting on the poorest students.

2. The distribution of students counted as eligible for school lunches differs substantially from the distribution of poor children counted in the census for the same year at the state level and probably at the local level as well, apparently because of differences in the percentage of eligible children who sign up for the program. Using this measure could cause large funding shifts that are inconsistent with more complete poverty data.

## *Improving the Timeliness of Poverty Data*

Because Chapter 1 funds are allocated to counties using decennial census data, areas that experience large demographic shifts over the course of the decade may be proportionally overfunded or underfunded until new census data are released. Data from the 1990 census reveal that the distribution of school-age poor children has shifted westward from the northeast. These shifts will cause major changes in the distribution of Chapter 1 funding across the states. Four alternatives are as follows:

1. **Working with the Census Bureau to obtain more current data on child poverty.** The Census Bureau has proposed developing methods for updating county-level income and poverty estimates every two years. These estimates would combine data from the decennial census, annual federal income tax returns, and annual Census Bureau surveys. The proposed project is experimental, and the reliability of the updated poverty estimates will remain uncertain until they are produced and tested. Although the Census Bureau cannot guarantee reliable county-level child poverty estimates until further research is funded, the proposal provides a promising alternative to decennial poverty counts for a relatively low cost (projected at $420,000 annually). Furthermore, if county-level estimates prove infeasible, the project would at least be able to provide state-level updates that capture regional shifts in the distribution of poor children.

2. **"Aging" the decennial census data using percentage change in state enrollment.** Using this adjustment assumes that the percentage of poor children in each state remains constant, whereas use of the unadjusted census counts assumes that the absolute number of poor children in each state remains constant. If this option had existed during the 1980s, funds would have shifted from states with slow-growing or declining populations to states whose populations grew at above-average rates. A comparison with the 1990 census state-level counts of poor children reveals that the 1980 counts adjusted for percentage change in state enrollment are a more accurate predictor of 1990 poverty rates than the unadjusted 1980 census, but still result in considerable error.

3. **Using counts of students eligible for the subsidized school lunch program to replace or adjust the decennial census counts of poor children.** Because the subsidized lunch program uses a looser definition of poverty — up to 130 percent of the poverty line for free lunch and up to 185 percent for reduced-price lunch — using this measure could reduce the targeting of Chapter 1 funds on the poorest children. In addition, subsidized school lunch counts exclude many poor children, particularly children of illegal aliens and high school and private school students. Free lunch participants and poor children counted in the census are distributed very differently among the states, with the state ratio of 1989 free lunch participants to 1990 census child poverty counts ranging from 184 percent in Hawaii to 106 percent in Montana. Shifting to this poverty measure could cause funding reductions of up to 24 percent in some states.

4. **Allowing states to update poverty counts using the best data available.** Allowing states to disregard the county allocations and distribute funds to LEAs solely on the basis of the poverty measure that they deem most current and reliable would allow adjustments for within-state poverty and population shifts over the course of the decade. However, this practice would not address shifts in the distribution of poor children across states.

## *Adjusting for Differences in the Cost of Education*

The current Chapter 1 formula attempts to compensate for differences in the cost of education across states by adjusting county allocations using state average per pupil expenditure (limited to within 80 percent and 120 percent of the national average). In FY 1993 the per-pupil expenditure factor redistributed $364 million — or 6 percent of Chapter 1 funds — mainly away from relatively low-income states in the South to relatively high-income states in the Northeast. The state per-pupil expenditure factor has been criticized as an inaccurate cost proxy, because it tends to underestimate costs in low-income, low-expenditure states, so that those who are needier to begin with get less federal help. Four alternatives are as follows:

1. **Eliminating the cost factor (by using the national average per-pupil expenditure).** This option would shift funds mainly away from high-income northeastern states to low-income southern states, but would fail to recognize the legitimacy of documented cost differences among states. One recent study estimated that there was a 57 percent variation in purchasing power between the highest-and lowest-cost states in 1990 (McMahon and Chang, 1991). Moreover, because the national poverty line does not adjust for regional differences in the cost of living, the current formula already undercounts poor children in states where the cost of living is high. Eliminating the cost factor would cause funding reductions of up to 21 percent in many needy urban counties, including New York City, Trenton, and Boston. Many of these areas are already slated to lose large percentages of their funding when the 1990 census data are used for the first time in the FY 1993 allocations.

2. **Narrowing the range of the state per-pupil expenditure factor to between 90 percent and 110 percent of the national average.** This option would generally shift allocations in the same direction as elimination of the cost factor, but it would retain some adjustment for interstate cost differences and cause less severe funding shifts (the maximum loss would be 10 percent in eight states). Generally, this option would generate gains for the southern states and losses for northern states.

3. **Using a teacher salary index as a proxy for interstate cost differences.** A teacher salary index, which would represent an actual cost, would remove the effects of fiscal capacity and fiscal effort inherent in the expenditure factor. However, a teacher salary index has other problems, including difficulties in factoring out differences in teacher quality, education, and experience. Thus, a salary index may still overstate cost differences among states, although to a smaller extent than the per-pupil expenditure factor. Adjusting a teacher cost index for differences in degrees and experience might improve this option. However, the federal government does not currently compile annual state-level data on average teacher salaries, and adjusting for teacher training and experience would significantly increase the complexity of this task. According to salary data compiled by the National Education Association, this option would shift $243 million among states, with $198 million (81 percent) going to California. Teacher salaries in California reflect the state's high cost of living, but California loses funds under the current cost proxy because its educational expenditures are well below the national average.

4. **Using a general wage index as a proxy for interstate cost differences.** A general wage index is a reasonable proxy for interstate differences in the cost of living, a major factor affecting the cost of education. It would also avoid some of the problems associated with using a teacher salary index, such as the difficulty in separating out teacher quality, education, and experience. This alternative would shift $270 million among states, with California again being a major winner, receiving $136 million. Other states that would receive increases are a mixture of western and southern states.

## *Adjusting for Differences in Fiscal Capacity and Fiscal Effort*

Although neither fiscal capacity nor fiscal effort is part of the current formula, other federal and state education funding formulas take these factors into consideration. A fiscal capacity adjustment would distribute Chapter 1 funds in inverse proportion to a state's capacity to raise revenues (using, for example, an index of state per-pupil income). A fiscal effort adjustment would reward states that spend above average on education relative to their fiscal capacity. Two options for reform are as follows:

1. **Incorporating fiscal capacity represented by per-pupil income into the Chapter 1 formula.** Fiscal capacity factors are used in several other major federal programs (e.g., Vocational Education, AFDC, and Medicaid) and are a standard feature of state school funding formulas. Adding a fiscal capacity factor to the Chapter 1 formula, using an index of state average per-pupil income relative to the national average, would increase the share of funding for the poorest quartile of counties from 43 percent to 46 percent, shifting funds away from high-income states, mainly in the Northeast, to relatively low-income states in the South. This alternative tends to have effects that are opposite from those of the per-pupil expenditure (cost proxy) factor.

2. **Incorporating an income-based fiscal effort factor into the Chapter 1 formula.** Many states incorporate fiscal effort into their school funding formulas by rewarding school districts that levy higher property tax rates. Adding a fiscal effort factor to the Chapter 1 formula — using an index of the ratio of state and local revenues for elementary and secondary education to state fiscal capacity — would produce funding gains or losses of more than 20 percent in 14 states; this adjustment could be scaled back to produce more moderate shifts. Ideally, a Chapter 1 fiscal effort factor would use an index of state spending for the education of disadvantaged children, but uniform data are not available. Also, it is not clear that the incremental effect on Chapter 1 allocations would provide a strong enough incentive to affect state and local funding for education.

## *Comparability of Resources*

Where state school funding systems are inequitable, it is possible that Chapter 1 funds are being used to buy services in poor districts that wealthy districts routinely provide to all students through regular funds. Chapter 1 law requires that Chapter 1 and non-Chapter 1 schools within the same district receive comparable resources before Chapter 1 funds are added, but the law does not require comparability across districts. Furthermore, Chapter 1 comparability standards that measure equity in terms of dollars and teacher-student ratios may be missing factors critical to student success. If Chapter 1 students are expected to achieve the same high academic standards as other students, they need equal resources and similar access to challenging content and high-quality instruction.

Federal monitoring visits and studies of within-district comparability have found few violations of current comparability requirements. Even where studies have examined a broader set of measures than those contained in the regulations, commonly measured variables reveal few differences between Chapter 1 and non-Chapter 1 schools or between high-poverty and low-poverty schools; for example, high-poverty schools appear to have slightly lower student-teacher ratios and teachers with more training and experience. Nevertheless, more subjective indicators show stark contrasts across high- and low-poverty schools. Administrators in high-poverty schools were twice as likely to report difficulties in finding qualified staff, and one exploratory studies of 95 elementary schools found substantial differences in principal ratings of teacher quality, building conditions, and teacher perceptions of school quality.

Moreover, a large body of research and litigation has documented wide disparities in the quantity and quality of educational resources across school districts. When high-poverty schools are located in low-revenue districts, resource limitations may seriously hamper efforts to close the achievement gap between high- and low-poverty schools.

Three options for improving the comparability of resources across schools and districts are as follows:

1. **Making Chapter 1 funding contingent upon equalization of the state school funding system.** Proposals for an equalization requirement in Chapter 1 are intended to assure that Chapter 1 funds supplement a base of state and local resources that are distributed equitably across school districts within each state. However, there are concerns that Chapter 1 funds may represent too small a share of total education funding to provide an adequate "stick" for forcing states to undertake politically difficult equity reforms. Taking federal support for

disadvantaged children away from non-compliant states could further harm the same children who are most hurt by funding inequities.

2. **Developing standards for measuring the comparability of students' opportunity to learn.** Service delivery standards could eventually be used to assess the extent to which all children have access to similarly challenging content and high quality instruction. States are now setting new standards for acquisition of competencies in basic subjects, developing curricula based on these competencies, and designing new assessment methods to measure what students know and can do. Taking service delivery standards into consideration in the Chapter 1 program could move the comparability requirement closer to the underlying objective of equity in terms of equalizing learning opportunities across schools.

3. **Publicizing data on the equity of state school funding systems.** States vary widely in the equity of their school funding systems, with some states permitting differences in local wealth to cause large funding disparities and other states helping to support above-average funding levels for high-poverty districts. The federal government could focus public attention on the states with the greatest need for reform by supporting and disseminating research on the relative standing of each state on fiscal equity measures and on state's recent progress in improving equity.

# I

# Introduction

The Chapter 1 program provides federal financial assistance to school districts with large numbers of low-income families to develop, expand, and improve instructional programs designed to meet the needs of educationally disadvantaged children. The major purpose of this program is to break the link between family poverty and low student achievement. School districts are selected to receive Chapter 1 support largely on the basis of the number of children whose families have incomes below the poverty line. Despite this emphasis on low-income families, funds for this program are distributed widely; more than two-thirds of public elementary schools in the United States receive some support from the Chapter 1 program.

In recent years, researchers, educators, policymakers, and others have begun to question whether Chapter 1 funds are sufficiently targeted on the schools that have the greatest need for additional financial support. This question is being raised as a result of the widespread participation in the Chapter 1 program among schools and school districts, some of which do not have large numbers of low-income families. For example, at the elementary level, almost half of the schools that collectively serve fewer than 10 percent of the nation's poor children participate in the Chapter 1 program. At the other extreme, 14 percent of schools that serve more than 50 percent of the nation's poor children receive no Chapter 1 funds (Anderson, 1992). Moreover, many low-achieving children in high-poverty schools go unserved. For example, data on third-graders in the Prospects

longitudinal study indicate that one-third of the children who score at the 35th percentile or below on reading tests and who attend schools with poverty rates exceeding 75 percent do not receive Chapter 1 services (Abt Associates, 1993).

## *Purpose of This Report*

The purpose of this report is to examine alternative methods of allocating Chapter 1 funds, with an emphasis on enhancing the targeting of these funds to high-poverty communities. Specifically, this report analyzes the following subjects:

- The current Chapter 1 funds allocation formula;
- Alternative ways to improve the timeliness of poverty data used to allocate funds; and
- Alternative formulas that would —
  - increase the targeting of Chapter 1 funds on high-poverty communities,
  - adjust for differences in educational costs among school districts, and
  - adjust for differences in fiscal capacity and fiscal effort.

Among the questions addressed in this report are these:

- Are the neediest children being targeted by Chapter 1?
- Does the current formula take adequate account of geographic shifts in poverty over time?
- Are better measures of child poverty available, or could they be developed?
- Does the formula adjust appropriately for differences in the cost of education?

- Should the formula adjust for interstate differences in fiscal capacity and fiscal effort to support education? If so, how should fiscal capacity and effort be measured and reflected in the formula?

- Is Chapter 1 truly supplemental? What evidence exists to show that children from low-income families have unequal access to educational resources? Could the Chapter 1 program promote equalization of services?

## *Method of Analysis*

During the past year, many alternative procedures for allocating Chapter 1 funds have been suggested. This report analyzes many of these options, examines the premises underlying each option, and shows how the distribution of Chapter 1 funds among states and counties with different concentrations of poverty would be altered under the different allocating procedures.

The analyses presented in the report are based on simulations of fiscal year (FY) 1993 allocations to counties (aggregated into county poverty quartiles and state totals) under each formula option. Allocations were calculated without the current hold-harmless provision, which guarantees a county 85 percent of its prior year's allocation, and with Puerto Rico's allocation held constant. For comparison purposes, allocations under the current formula using these two assumptions are shown as well.

The effects of each option are examined by calculating the reallocation of resources among states, high- and low-poverty counties, the counties containing the 10 largest school districts, and the 10 counties with the highest concentrations of children in poverty.

In order to examine each formula option's influence on the distribution of Chapter 1 resources among counties with different levels of poverty concentrations, the counties were aggregated into quartiles according to their poverty levels. Using 1990 census poverty data, we ranked all counties according to the percentage of their population with poverty-level income. The counties were then divided into quartiles so that each quartile contained roughly 25 percent of the total number of school-age students in the nation. Counties in the highest-poverty quartile contained 45 percent of the total poor children; counties in the second-highest poverty quartile contained 26 percent, counties in the second-lowest 19 percent, and counties in the lowest 10 percent.

Most of the analyses that follow are based on the effects of a change in a single component of the existing formula. In a few cases, changes in two or more formula components are examined. There are, of course, many different ways in which variations in the different components of the formula could be combined, each of which would have different effects on the allocation of Chapter 1 funds.

Data for the simulations of alternative allocation formulas came from the following sources:

- U.S. Department of Education (1979 and 1989 public school enrollment numbers);
- U.S. Department of Agriculture (state counts of students eligible for free and reduced-price lunches in 1989);
- U.S. Department of Commerce (fiscal capacity indicators);
- U.S. Department of Commerce, Bureau of the Census (counts of children ages 5-17 and poor children ages 5-17 from the 1980 and 1990 censuses);

- U.S. Department of Health and Human Services, Administration for Children and Families (1989-1990 Aid to Families with Dependent Children [AFDC] counts for the states);
- U.S. Department of Labor, Bureau of Labor Statistics, Employment and Wages, Annual Averages, 1991 (general wage index);
- U.S. Advisory Commission on Intergovernmental Relations (fiscal capacity indicators);
- National Education Association, 1991-92 Estimates of School Statistics (teacher salary index);
- Maryland Department of Education (1989 free school lunch counts);
- Michigan Department of Education (1989 free school lunch counts);
- New York Department of Education (1990 free school lunch counts);
- Texas Education Agency (1989 free school lunch counts); and
- Washington Department of Education (1989 free school lunch counts).

## *Organization of the Report*

The remainder of this report is organized into six sections. Section 2 describes and analyzes the existing Chapter 1 funds allocation formula. Section 3 analyzes the targeting of the Chapter 1 program, including the consequences of current formula provisions on the distribution of funds among schools, school districts, and counties, and the potential effects of selected formula alternatives designed to improve targeting.

Section 4 describes and analyzes demographic shifts in poverty among school-age children and youth from one decennial census to another and the resulting impact on the distribution of Chapter 1 funds among counties and states. It also discusses methods of

updating the estimates of poverty counts for the years between the decennial censuses using such measures as eligibility for free and reduced-price school lunches and eligibility for AFDC. Section 4 also explores the effects of basing Chapter 1 allocations on more frequently updated child poverty data.

Section 5 discusses the rationale for adjusting Chapter 1 allocations for interstate differences in costs, the redistributive effects of the current cost adjustment, the accuracy of the current per-pupil expenditure factor as a proxy for the cost of education, and the effects of substituting alternative cost proxies on the distribution of Chapter 1 funds among states and counties.

Section 6 discusses the rationale for adjusting Chapter 1 allocations for interstate differences in fiscal capacity and fiscal effort, and examines the redistributive effects of doing so.

Section 7 addresses Chapter 1 comparability requirements specifying that Chapter 1 and non-Chapter 1 schools within the same district must receive comparable resources before Chapter 1 funds are added. It examines the debate over whether current comparability requirements should be expanded to include a broader set of measures or to extend across districts. The section presents a set of options for reform including making Chapter 1 funding contingent upon a state's equalizing per-pupil expenditures across school districts within the state, developing opportunity-to-learn standards, and publicizing data on the equity of state school funding systems.

***Introduction 6***

# II

# The Current Chapter 1 Funding Formula

Chapter 1 authorizes a number of programs designed to meet the educational needs of disadvantaged school children. Part A of Chapter 1 authorizes grants to local education agencies (LEAs), which make up 90 percent ($6.1 billion in FY 1993) of all funds appropriated under Chapter 1 ($6.8 billion). This program is the primary focus of this report.[1]

Chapter 1 grants for local education agencies (LEAs) are allocated through two formulas, Basic Grants and Concentration Grants. Basic Grants have existed with some modifications since the program's inception in 1965. Concentration Grants were first added in 1978 to provide additional funds to school districts with high concentrations of children in poverty. In FY 1993, 89 percent of Chapter 1 grants for LEAs were appropriated for Basic Grants ($5.4 billion) and 11 percent for Concentration Grants ($676 million).

[1]Part B of Chapter 1 authorizes the Even Start program ($89 million in FY 1993). Part D authorizes grants for state education agency (SEA) programs to address the educational needs of three exceptionally disadvantaged groups: migrant children ($303 million), handicapped children ($126 million), and neglected and delinquent youth for whom the state is directly responsible for providing education ($35 million). Part C authorizes the Secondary School Programs for Basic Skills Improvement and Dropout Prevention and Reentry, but this program has never been funded. Funds are also provided for state administration ($61 million), state program improvement grants ($26 million), capital expenses for services to private school children ($40 million), and evaluation and technical assistance ($19 million).

This section describes trends in funding and participation levels since 1980, current provisions for the distribution of funds, and effects of the current formula on targeting to the highest-poverty communities.

## *Funding and Participation Levels*

Since its enactment in 1965, the level of funding for Chapter 1 has been the subject of considerable debate. Chapter 1 authorizations provide for LEA grants of 40 percent of per-pupil expenditures for each formula-eligible child. However, except for the program's first year, actual appropriations have been substantially below 40 percent (they were 22 percent in FY 1993). Thus Chapter 1 allocations must be proportionately reduced to match the appropriation amount.

Since the program's last reauthorization in 1988, Chapter 1 funding has risen dramatically, from $3.8 billion for the 1988-89 school year to $6.1 billion for 1993-94 — a 33 percent increase after adjusting for inflation (see exhibit 1). However, part of this increase compensated for funding declines, in both current and inflation-adjusted dollars, in the early 1980s. The net increase in funding between 1980 and 1993, after adjusting for inflation, was only 26 percent. Over the same period, total education funding rose by 40 percent. Consequently, the ratio of Chapter 1 funding per participant to total current education expenditures per pupil fell from 25 percent in 1980-81 to 18 percent in 1991-92.

Increasing program funding is commonly discussed as a way to expand program coverage to more children. However, participation trends over the past decade have

## Exhibit 1

## Chapter 1 Funding and Participation Trends

| Year | Appropriations | | Appropriations (Inflation-Adjusted) | | Participation | | Per-Pupil Funding (in 1991-92 $) | |
|---|---|---|---|---|---|---|---|---|
| | Current $ in Billions | Annual Change | Constant 1991-92 $ | Annual Change | Millions | Annual Change | Chapter 1 $ per Participant | Total $ per Pupil |
| 1979-80 | $ 2.777 | | $ 4.733 | | 5.162 | | $ 916 | $3718 |
| 1980-81 | $ 2.732 | -1.6% | $ 4.191 | -11.4% | 5.076 | -1.7% | $ 825 | $3681 |
| 1981-82 | $ 2.611 | -4.4% | $ 3.738 | -10.8% | 4.619 | -9.0% | $ 809 | $3708 |
| 1982-83 | $ 2.563 | -1.9% | $ 3.547 | -5.1% | 4.448 | -3.7% | $ 797 | $3853 |
| 1983-84 | $ 2.758 | 7.6% | $ 3.696 | 4.2% | 4.573 | 2.8% | $ 808 | $3992 |
| 1984-85 | $ 3.004 | 8.9% | $ 3.887 | 5.2% | 4.713 | 3.1% | $ 824 | $4211 |
| 1985-86 | $ 3.200 | 6.5% | $ 4.053 | 4.3% | 4.740 | 0.6% | $ 854 | $4419 |
| 1986-87 | $ 3.062 | -4.3% | $ 3.777 | -6.8% | 4.733 | -0.1% | $ 797 | $4575 |
| 1987-88 | $ 3.454 | 12.8% | $ 4.094 | 8.4% | 4.951 | 4.6% | $ 826 | $4685 |
| 1988-89 | $ 3.830 | 10.9% | $ 4.335 | 5.9% | 5.047 | 1.9% | $ 858 | $4912 |
| 1989-90 | $ 4.026 | 5.1% | $ 4.349 | 0.3% | 5.328 | 5.6% | $ 815 | $5031 |
| 1990-91 | $ 4.768 | 18.4% | $ 4.905 | 12.8% | 5.546 | 4.1% | $ 884 | $5042 |
| 1991-92 | $ 5.558 | 16.6% | $ 5.558 | 13.3% | | | | |
| 1992-93 | $ 6.134 | 10.4% | $ 5.944 | 7.1% | | | | |
| 1993-94 | $ 6.126 | -0.1% | $ 5.745 | -3.5% | | | | |

Exhibit reads: Participation changes are only roughly associated with changes in funding levels. Between 1980 and 1991, participation increased by 7 percent but inflation-adjusted funding grew by only 4 percent, so funding per participant remains below its 1980 level. Over the same period, total education funding per pupil rose by 36 percent.

Note: Because Chapter 1 is forward funded and school districts receive funds one year after they are appropriated, this table shows appropriations for the year for which they were appropriated rather than the year in which they were appropriated.

Sources: U.S. Department of Education, Budget Service (appropriations); U.S. Office of Management and Budget (CPI-W inflation index); Westat Inc., Summary of Chapter 1 Participation and Achievement Information, 1990-91, unpublished manuscript (participation); National Center for Education Statistics, Digest of Education Statistics, 1992 (total current education expenditures per pupil). Inflation-adjusted figures differ from the Interim Report for the National Assessment of Chapter 1 because the inflation index has been updated.



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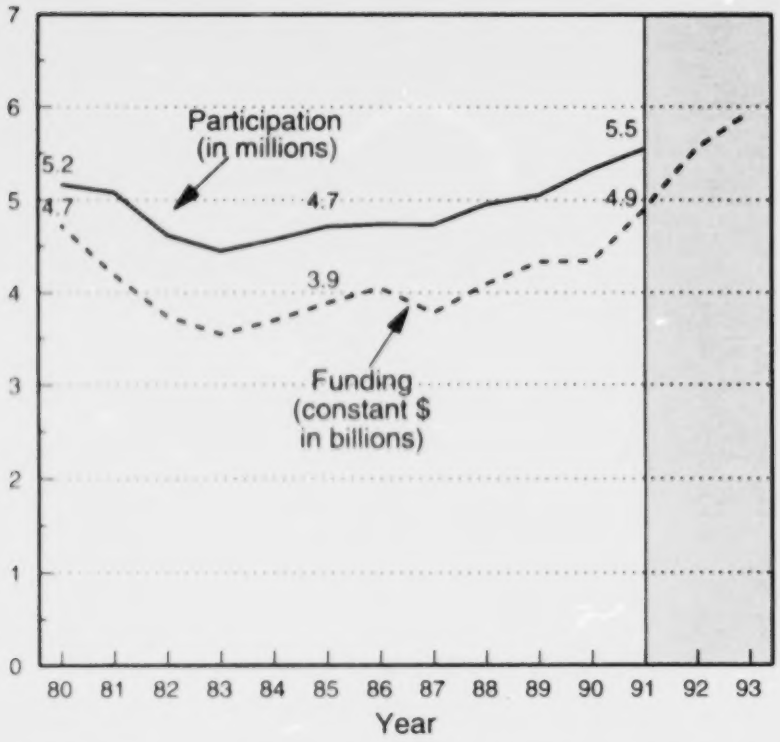
been only roughly linked to funding trends. Although participation does tend to rise and fall with changes in inflation-adjusted funding levels, the rates of change are mediated by local choices about resource allocation. For example, between 1987 and 1991, funding rose by 30 percent but participation increased by only 17 percent (see exhibit 2). School district officials may seek to maintain participation levels in periods of declining resources by using carryover funds or by decreasing the intensity of services provided. Funding increases may be used not only to serve more students but also to replenish reserves, raise staff salaries, purchase computers, and increase the level of services provided to current participants.

The small net increases in Chapter 1 funding and participation during the past decade were accompanied by major reductions in Chapter 1 staffing (see exhibit 2). The number of Chapter 1 teachers declined by 17 percent, from 87,000 in 1980 to 72,000 in 1991, whereas the number of aides showed a similar rate of decline (from 78,000 to 65,000). Consequently, fewer Chapter 1 staff must serve more participants. The number of Chapter 1 participants per Chapter 1 teacher increased from 66 in 1980 to 77 in 1991, while the number of participants per aide increased from 59 to 85.

Most of the decline in staffing occurred during the first half of the decade when Chapter 1 funding also was declining. Staffing reductions also reflect the rapid growth in teacher salaries during the 1980s, which considerably outpaced the general inflation rate and available Chapter 1 dollars. So long as increases in teacher salaries translated into commensurate improvements in teacher quality, this may not be cause for concern.

## Exhibit 2
## Funding, Participation, and Staffing Trends in Chapter 1

### Funding and Participation Trends




### Staffing Trends

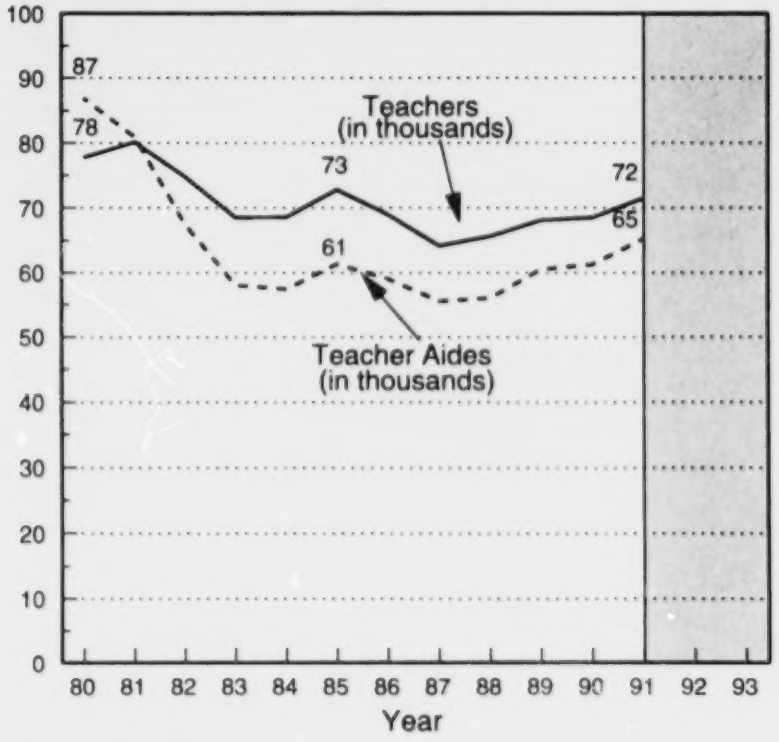



Exhibit reads: Participation changes roughly paralleled the direction of funding changes between 1980 and 1991, with inflation-adjusted funding increasing by a net 4 percent over the period and participation rising by 7 percent. However, the number of teachers declined by 8 percent and the number of aides declined by 30 percent, causing large increases in student-staff ratios.

Source: Chapter 1 Participation and Achievement Information (Westat Inc., 1992)

Note: Funding is shown in constant 1991-92 dollars for the school year for which it was appropriated.

However, if salary increases failed to improve teacher quality, then Chapter 1 services suffered real loss.

## *Current Provisions for the Distribution of Funds*

The federal government allocates Basic and Concentration Grants to the county level, primarily using the number of poor school-age children (ages 5-17) from the last decennial census. The county allocations are adjusted using state average per-pupil expenditures (limited to between 80 and 120 percent of the national average), a factor intended to compensate for differences in the cost of education across states. States then suballocate these funds to school districts in accordance with the number of children from low-income families in each district, using the census, participation in the subsidized school lunch program, or other data on children from low-income families. Districts select schools for participation in the program in accordance with each school's poverty ranking within the district. Schools select students to receive services on the basis of educational need, regardless of their family income.

## *Basic Grants*

Basic Grants, which have existed since the inception of the Chapter 1 program, distribute a large majority of Chapter 1 grants to LEAs (89 percent in FY 1993), and have not undergone a significant formula revision since the early 1970s.

**Allocation to Counties.** Although the law directs the Department of Education to allocate Basic Grant funds using LEA data, complete and nationally uniform data on numbers of formula-eligible children are not available at the local level.[2] When data are insufficient, the law permits the Department to calculate aggregate county allocations and to delegate to state education agencies (SEAs) the distribution of these funds among LEAs.

Chapter 1 Basic Grants are allocated to counties each year according to a formula based on two factors: the number of formula-eligible children in each county and the average expenditure per pupil in each state. The number of formula-eligible children is derived by summing:

> the number of children ages 5-17 with family incomes below the poverty level identified by the most recent decennial census
>
> plus
>
> the number of children ages 5-17 in families receiving Aid to Families with Dependent Children (AFDC) payments when these payments are above the current census poverty level
>
> plus
>
> the number of children ages 5-17 in institutions for neglected and delinquent children that are not state-operated
>
> plus
>
> the number of children ages 5-17 in foster homes supported with public funds.

---

[2]Nationally uniform child poverty data at the school district level are available for all states but California, which chose not to participate in the Census Bureau's school district mapping project. In California, data are available for all but 14 counties, which contain 238 school districts and 380,000 students. In addition to being incomplete, the data may not be reliable for small districts.

Per-pupil expenditures for each state, for purposes of the allocation formula, cannot be less than 80 percent or more than 120 percent of the national per-pupil expenditure. Special provision is made to adjust the per-pupil expenditure for Puerto Rico. This variable serves as a proxy measure for educational cost differences across states.

To estimate the amount allocated to each county, the total number of formula-eligible children in each county is multiplied by 40 percent of the state average per-pupil expenditure. These are still preliminary calculations. These allocations can be further modified in several situations:

- A hold-harmless provision guarantees that each county will receive at least 85 percent of its preceding year's allocation.
- A small-state provision assures that, if certain conditions are met, each state will receive a minimum of one-quarter of one percent of the total amount available for Chapter 1 Basic Grants, subject to one limitation. To prevent a small state from receiving a minimum payment that is disproportionate to the number of children it must serve, the minimum is capped at the lesser of 150 percent of the state's payment for the previous year or an amount equal to 150 percent of the national per-pupil Chapter 1 payment for the current year multiplied by the number of Chapter 1-eligible pupils in the state.

The final step in determining a county's Chapter 1 funding is to reduce each county's allocation proportionately so that actual allocations equal that year's appropriation. In FY 1993, allocations were reduced from $15.5 billion to $5.4 billion, for a net "ratable reduction" of 65 percent.

**State Distribution of Basic Grants.** When SEAs suballocate Basic Grants to LEAs they must first determine and set aside the amount of the county allocation generated by the formula count of children in institutions for neglected and delinquent children. Then the

SEA must distribute the remaining county allocation on the basis of poverty data. Each SEA has some flexibility in the choice of data used to determine Basic Grant allocations for LEAs. The SEA may use data more current or accurate than the census counts that are used in the county allocation formula. (In states where LEAs have the same boundaries as counties, this reallocation does not occur.)

Although SEAs possess broad discretion over use of these data, their purpose must be to direct funds to low-income areas. The SEA must ensure that it is using the best available data on the number of children from low-income families. Moreover, in determining the number of children from low-income families in the LEAs in each county, the SEA is required to use the same measure of low-income throughout the state. For example, an SEA might choose to use both decennial census data and current data on free school lunches only if these data were consistently used for allocations throughout the state.

In some cases an SEA may reallocate Basic Grant funds among counties. For example, an SEA is not required to allocate Basic Grant funds to an LEA with fewer than 10 children eligible to be counted under the formula. In addition, in any state where a large number of LEAs overlap county boundaries, the SEA may request permission to make allocations directly to LEAs without regard to counties. If an SEA allocates directly to LEAs, the SEA must use the same factors (e.g., census rather than other poverty data) as those used by the Department of Education in the county allocation formula.

## *Concentration Grants*

Concentration Grants provide supplemental funds to LEAs with high numbers or percentages of poor children, on the assumption that these school districts face unusual burdens in meeting the special educational needs of these children. These funds are used for the same purposes as Basic Grants.

**Allocation to Counties.** Counties receive Concentration Grants when their population of formula-eligible children exceeds 6,500 children or 15 percent of school-age children (ages 5-17) in the county. Allocations for Concentration Grants are determined as follows: First, the Department of Education multiplies the county's per-pupil grant under the Basic Grant by the number of formula-eligible children in excess of 6,500 in the county, if it qualifies on that basis, or by the total number of formula-eligible children in the county, if it qualifies by virtue of the percentage criterion. If a county meets both criteria, the Department uses the count that produces the greater amount. Then the Department compares the resulting amount with the sum of the amounts calculated for all counties eligible for Concentration Grants, and allocates a proportionate share of the total Concentration Grant appropriation to each county. There is a small state minimum but no hold-harmless provision.

Again, county allocations must be proportionately reduced to match the appropriations amount. In FY 1993, allocations were reduced from $12.3 billion to $676 million, for a net ratable reduction of 95 percent.

**State Suballocation of Concentration Grants.** As with Basic Grants, once the federal government has allocated funds to counties, SEAs must suballocate the funds to individual school districts within each county using the best available poverty data. Normally, school districts must meet the same eligibility as counties — formula-eligible children exceeding 6,500 children or 15 percent of the school-age children in the school district — to receive Concentration Grant funds. Each qualifying district's allocation is proportionate to the number or percentage of its poor children. If no individual district in the county meets the qualifying criteria, SEAs allocate funds to districts in the county in rank order of their respective concentration and numbers of poor children and in amounts consistent with the concentration of poverty. In this case, only districts with a concentration of poverty above the county average may receive funds.

States are permitted to retain up to 2 percent of their total Concentration Grant allocations in order to make direct payments to LEAs in ineligible counties. There is no LEA hold-harmless allocation for Concentration Grant funds, and there is no guaranteed minimum allocation.

## *School Selection*

After the Basic and Concentration Grant funds are allocated to LEAs from the state SEA, the LEAs become responsible for further allocating these funds among their schools. When school districts receive their Chapter 1 allocations from the states, they combine Basic and Concentration Grants, using the two funding streams as one.

Within a school district, a school is eligible for the Chapter 1 program if its attendance area has a poverty rate that is relatively high for that district (typically based on data from the subsidized school lunch or AFDC programs). In general, districts select the schools that rank the highest on measures of poverty, but the law allows several exceptions to a strict ranking. These include:

- The grade-span option, which allows districts to limit services to designated grades;
- The "no wide variance" option, which allows districts to serve all schools if the range in school poverty rates is narrow (between 5 percent above and 5 percent below the district average);
- The 25 percent option, which allows districts to serve any school where at least 25 percent of the students are from low-income families; and
- The "grandfather" option, which allows districts to continue programs for one additional year in schools no longer eligible for Chapter 1 services.

The allocation of funds among eligible schools is based on the number and the educational needs of low-achievers, rather than on the number of poor children alone. Generally, rankings of schools by participation in the free or reduced-price school lunch program correspond to rankings by low achievement, but there are exceptions. An analysis of six urban school districts found that two districts showed negative correlations between school lunch participation and numbers of low-achieving students (Westat Inc., 1992a). One possible explanation is that these districts appear to have large populations of illegal immigrants, whose children may be less likely to apply for the subsidized school lunch program. Secondary school students are also much less likely than elementary school students to participate in the subsidized school lunch program.

## *Identifying Children to Be Served*

The final step is to select the children to receive Chapter 1 services. Children are selected to receive Chapter 1 services on the basis of low achievement, in accordance with their need for compensatory education, regardless of their family income.

In order to make this selection within school attendance areas chosen to receive services, the LEA conducts an annual assessment. Each LEA must establish written or oral testing instruments for each grade level and instructional area to select the educationally disadvantaged children to be served, to determine the specific needs of the selected children, and to evaluate what resources are needed. If available Chapter 1 funds are insufficient to serve all eligible children, which is usually the case, the LEA chooses children from the pool of eligible students to ensure that those "having the greatest need" for special assistance receive Chapter 1 help. However, a child who was identified as being in greatest educational need in a previous year, and who continues to be educationally disadvantaged but is no longer in greatest educational need, is permitted to continue in a Chapter 1 program for up to two years.

## *Effects of the Current Formula on Targeting*

Under current formula provisions, Chapter 1 funds are spread across most school districts and schools in the nation. Virtually all counties, 93 percent of school districts, and 71 percent of public elementary schools receive Chapter 1 funds. Substantial numbers of schools at all poverty levels participate in the program. At the elementary level, almost

half of the schools serving fewer than 10 percent poor children participate in Chapter 1, while 14 percent of schools serving more than 50 percent poor children receive no Chapter 1 funds (Anderson, 1992). As a result, many low-achievers in high-poverty schools go unserved; Prospects study data on first- and fourth-graders indicate that about one-third of the children who score at the 35th percentile or below on reading tests in schools with poverty rates exceeding 75 percent do not receive Chapter 1 services (Abt Associates, 1993).

Because the federal government directly allocates funds to the county level, this report focuses on the distribution of funds among counties (although school-level targeting is also examined). The distribution of Chapter 1 funds among counties shows the targeting of Basic and Concentration Grant formulas to concentrations of poverty. The counties in the highest-poverty quartile, which serve 25 percent of all school-age children and 45 percent of poor children, receive 43 percent of the funds (see exhibit 3). The targeting ratio shows that the share of funding in the highest poverty quartile is 96 percent as great as their share of the nation's poor children. The least-poor quartiles of counties, in contrast, receive disproportionately large shares of funding. The final column of the exhibit shows that the counties serving the 10 largest school districts also receive a disproportionately large share of funding.

Concentration Grants are targeted more heavily on the highest-poverty counties, which receive 52 percent of Concentration Grant funds and 42 percent of Basic Grant funds. But because Concentration Grants distribute only a small share of all Chapter 1 funds,

they have little influence on overall funding patterns. Moreover, Concentration Grants are less concentrated than they could be: 67 percent of the nation's counties qualify for Concentration Grants and 80 percent of children counted as eligible under the Basic Grant formula live in counties that receive Concentration Grants.

## Exhibit 3
## Distribution Of School-Age Children, Poor Children, And Chapter 1 FY 1993 Funds Among Counties

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile[a] | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts[b] |
| Poverty rate for children ages 5-17 | 21.5% or more | 15.7% to 21.5% | 10.7% to 15.7% | 10.7% or less | |
| Children ages 5-17 | 25% | 25% | 25% | 25% | 13% |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Basic Grants | 42% | 26% | 20% | 12% | 19% |
| Concentration Grants | 52% | 32% | 14% | 2% | 25% |
| Total LEA grants | 43% | 26% | 20% | 11% | 20% |
| Targeting ratio: LEA grant share compared with share of poor children ages 5-17 | 0.96 | 1.00 | 1.05 | 1.10 | 1.25 |

Exhibit reads: 45 percent of the nation's poor children live in the highest-poverty counties, which receive only 43 percent of Chapter 1 grants to LEAs.

Note: In order to permit comparisons with the simulations of formula alternatives in the following sections of this report, FY 1993 allocations were calculated without the current 85 percent hold-harmless provision, which would phase in major shifts over a number of years. Puerto Rico's allocation was held constant from FY 1992. All other current formula provisions were retained.

a) Each poverty quartile contains roughly one-fourth of the nation's school-age children, according to the 1990 census.

b) The 10 largest school districts and their counties are New York (Bronx, King, New York, Queens, and Richmond); Los Angeles; Chicago (Cook); Dade; Philadelphia; Houston (Harris); Detroit (Wayne); Broward; Fairfax; and Dallas.

# III

# Targeting Chapter 1 Funds

This section examines alternatives for increasing the targeting of Chapter 1 funds to the highest-poverty schools. Because nationally uniform data on child poverty are available only down to the county level, most targeting options examined here focus on the allocation of funds to counties. However, alternate provisions for allocations to districts and schools also are examined.

## Section Summary

The goals of the Chapter 1 program is to break the link between family poverty and low student achievement, particularly for children in schools with high concentrations of poverty. To support this goal, Chapter 1 targets federal funds to counties and school districts primarily in accordance with their numbers of children from low-income families. Schools become eligible for the program on the basis of their poverty ranking within the district but receive funds on the basis of educational need (typically, the number of children meeting the school district's definition of low-achieving).

Different strategies are available to achieve roughly the same degree of targeting on high-poverty communities. For example, a goal of targeting half of all Chapter 1 funds to the quartile of counties with the highest poverty rates could be achieved (or nearly achieved) in four different ways:

1. **Increasing the share of funds allocated through the existing Concentration Grant provision**. This option would strengthen targeting by working within the existing law. To reach the goal of targeting half of all Chapter 1 funds to counties in the highest poverty quartile, it would be necessary to allocate 75 percent of all funds through the Concentration Grant provision. Small increases in the Concentration Grant share (e.g., from 11 percent to 20 percent of appropriations) would have a minimal effect.

2. **Targeting Concentration Grants more intensively on high-poverty counties while raising the share of funds allocated through Concentration Grants**. Raising the eligibility threshold from 15 percent poverty to 18 percent (the national poverty rate for school-age children) while raising the Concentration Grant share to 50 percent would achieve the goal of targeting half of the funds to the quartile of counties with the highest poverty. This approach would eliminate 1,435 counties from the Concentration Grant formula, but they would still receive Basic Grants.

3. **Requiring communities to absorb the costs of serving the special needs of a certain percentage of their poor children**. This "absorption formula" could replace the current dual formula of Basic and Concentration Grants with a simpler, more strongly targeted formula by counting only those children in excess of a specified poverty rate. Poor counties would receive more funds because a greater portion of their children would remain under the formula. With a 6 percent absorption rate, a 50 percent targeting goal could be achieved; 103 counties containing 1 percent of the children eligible under the current formula would be eliminated from the program.

4. **Allocating funds through a weighted formula that gives more weight to students above a specified poverty threshold**. This option could direct a greater proportion of funding to counties with higher poverty rates while producing a less severe impact on low poverty counties than the other options presented. No counties would be eliminated from Chapter 1. Instead of requiring communities with low-poverty rates to absorb all costs of serving a certain percentage of their poor children, this approach would require them to shoulder a greater share of the cost for these students, thus shifting part of available funds to the neediest communities. This approach could approximate the 50 percent targeting goal by fully counting students above a 18 percent poverty threshold and weighting students below the threshold by one-half.

These options would substantially redistribute Chapter 1 funds among the states and produce gains for most large urban counties (see exhibits 4 and 5). In general, options designed to increase funding to poor counties tend to shift Chapter 1 funds from

## Exhibit 4
## Options for Directing Half of All Funds to Counties in the Highest Poverty Quartile
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Raise Concentration Grant Share to 75% | | Raise Concentration Share to 50% with 18% Threshold | | 6% Absorption | | 18% Weighted Pupil | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $128,357 | 12% | $125,957 | 10% | $126,574 | 10% | $119,583 | 4% |
| Alaska | 11,364 | 7,174 | -37% | 9,961 | -12% | 10,866 | -4% | 10,866 | -4% |
| Arizona | 91,258 | 106,816 | 17% | 103,598 | 14% | 95,011 | 4% | 88,542 | -3% |
| Arkansas | 68,379 | 75,857 | 11% | 74,895 | 10% | 76,058 | 11% | 73,177 | 7% |
| California | 664,724 | 742,310 | 12% | 741,994 | 12% | 666,963 | 0% | 636,082 | -4% |
| Colorado | 62,334 | 52,238 | -16% | 57,701 | -7% | 56,670 | -9% | 61,807 | -1% |
| Connecticut | 47,114 | 33,145 | -30% | 40,450 | -14% | 32,501 | -31% | 41,630 | -12% |
| Delaware | 12,128 | 6,832 | -44% | 8,079 | -33% | 11,653 | -4% | 11,653 | -4% |
| District of Columbia | 18,083 | 21,193 | 17% | 21,405 | 18% | 20,080 | 11% | 18,854 | 4% |
| Florida | 269,056 | 277,066 | 3% | 269,196 | 0% | 268,587 | 0% | 250,211 | -7% |
| Georgia | 156,652 | 163,813 | 5% | 162,590 | 4% | 163,792 | 5% | 164,527 | 5% |
| Hawaii | 16,689 | 13,516 | -19% | 15,468 | -7% | 15,180 | -9% | 15,180 | -9% |
| Idaho | 19,851 | 17,007 | -14% | 13,794 | -31% | 18,148 | -9% | 17,677 | -11% |
| Illinois | 283,664 | 288,031 | 2% | 291,554 | 3% | 281,232 | -1% | 275,893 | -3% |
| Indiana | 96,244 | 75,203 | -22% | 72,237 | -25% | 83,443 | -13% | 86,134 | -11% |
| Iowa | 45,180 | 27,908 | -38% | 31,690 | -30% | 40,040 | -11% | 41,355 | -8% |
| Kansas | 45,272 | 36,172 | -20% | 36,530 | -19% | 41,654 | -8% | 42,058 | -7% |
| Kentucky | 106,263 | 118,208 | 11% | 116,848 | 10% | 117,306 | 10% | 112,242 | 6% |
| Louisiana | 173,254 | 203,051 | 17% | 201,267 | 16% | 204,501 | 18% | 201,060 | 16% |
| Maine | 22,174 | 15,897 | -28% | 13,972 | -37% | 18,563 | -16% | 19,724 | -11% |
| Maryland | 77,405 | 60,263 | -22% | 70,102 | -9% | 60,341 | -22% | 84,470 | 9% |
| Massachusetts | 109,157 | 92,271 | -15% | 104,460 | -4% | 91,783 | -16% | 103,825 | -5% |
| Michigan | 266,081 | 269,688 | 1% | 268,077 | 1% | 264,782 | 0% | 269,077 | 1% |
| Minnesota | 74,623 | 60,323 | -19% | 57,928 | -22% | 60,347 | -19% | 66,881 | -10% |
| Mississippi | 114,058 | 131,614 | 15% | 132,990 | 17% | 137,089 | 20% | 137,040 | 20% |
| Missouri | 108,002 | 107,052 | -1% | 104,107 | -4% | 105,175 | -3% | 108,908 | 1% |
| Montana | 23,514 | 24,917 | 6% | 20,814 | -11% | 24,073 | 2% | 22,061 | -6% |
| Nebraska | 27,211 | 22,090 | -19% | 19,451 | -29% | 23,160 | -15% | 24,493 | -10% |
| Nevada | 16,133 | 10,669 | -34% | 13,216 | -18% | 15,180 | -6% | 15,180 | -6% |
| New Hampshire | 12,838 | 4,131 | -68% | 7,944 | -38% | 12,498 | -3% | 12,498 | -3% |
| New Jersey | 126,570 | 106,947 | -16% | 110,926 | -12% | 98,726 | -22% | 118,103 | -7% |
| New Mexico | 54,082 | 63,314 | 17% | 62,638 | 16% | 61,699 | 14% | 59,445 | 10% |
| New York | 556,321 | 580,654 | 4% | 570,984 | 3% | 589,633 | 6% | 604,355 | 9% |
| North Carolina | 118,303 | 96,788 | -18% | 104,458 | -12% | 116,372 | -2% | 115,359 | -2% |
| North Dakota | 15,180 | 11,700 | -23% | 11,971 | -21% | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 263,690 | 3% | 247,473 | -3% | 246,079 | -4% | 232,113 | -9% |
| Oklahoma | 76,415 | 84,105 | 10% | 80,179 | 5% | 79,608 | 4% | 74,321 | -3% |
| Oregon | 58,099 | 51,241 | -12% | 42,353 | -27% | 50,994 | -12% | 51,284 | -12% |
| Pennsylvania | 275,687 | 251,701 | -9% | 250,322 | -9% | 261,193 | -5% | 267,530 | -3% |
| Rhode Island | 19,022 | 19,038 | 0% | 15,888 | -16% | 15,653 | -18% | 16,022 | -16% |
| South Carolina | 84,348 | 87,289 | 3% | 84,866 | 1% | 89,483 | 6% | 85,704 | 2% |
| South Dakota | 17,038 | 16,477 | -3% | 15,095 | -11% | 17,906 | 5% | 18,161 | 7% |
| Tennessee | 110,730 | 125,063 | 13% | 112,024 | 1% | 114,847 | 4% | 106,001 | -4% |
| Texas | 532,606 | 600,581 | 13% | 606,178 | 14% | 586,604 | 10% | 564,517 | 6% |
| Utah | 29,338 | 19,821 | -32% | 23,556 | -20% | 21,248 | -28% | 26,598 | -9% |
| Vermont | 10,942 | 5,883 | -46% | 8,239 | -25% | 10,602 | -3% | 10,602 | -3% |
| Virginia | 92,885 | 81,709 | -12% | 85,655 | -8% | 81,551 | -12% | 92,984 | 0% |
| Washington | 84,666 | 72,757 | -14% | 74,761 | -12% | 72,902 | -14% | 77,781 | -8% |
| West Virginia | 60,076 | 68,898 | 15% | 65,678 | 9% | 66,597 | 11% | 63,395 | 6% |
| Wisconsin | 106,997 | 80,516 | -25% | 91,064 | -15% | 98,563 | -8% | 106,549 | 0% |
| Wyoming | 11,527 | 7,436 | -35% | 9,773 | -15% | 10,931 | -5% | 10,931 | -5% |

**Exhibit 5**
**Options for Directing Half of All Funds to Counties in the Highest Poverty Quartile**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| | | Raise Concentration Grant Share to 75% | | Raise Concentration Share to 50% with 18% Threshold | | 6% Absorption | | 18% Weighted Pupil | |
|---|---|---|---|---|---|---|---|---|---|
| Counties | Current Formula | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $431,112 | 17% | $430,993 | 17% | $441,867 | 20% | $440,033 | 20% |
| Los Angeles (CA) | 242,248 | 283,910 | 17% | 286,749 | 18% | 261,059 | 8% | 239,255 | -1% |
| Cook (IL) | 170,332 | 199,626 | 17% | 201,622 | 18% | 184,420 | 8% | 169,671 | 0% |
| Dade (FL) | 60,380 | 70,764 | 17% | 71,471 | 18% | 66,402 | 10% | 61,868 | 2% |
| Philadelphia (PA) | 75,952 | 89,015 | 17% | 89,905 | 18% | 89,641 | 18% | 88,070 | 16% |
| Harris (TX) | 76,051 | 89,130 | 17% | 90,021 | 18% | 78,813 | 4% | 69,843 | -8% |
| Wayne (MI) | 104,853 | 122,886 | 17% | 124,115 | 18% | 122,649 | 17% | 119,737 | 14% |
| Broward (FL) | 19,181 | 18,438 | -4% | 19,900 | 4% | 17,200 | -10% | 16,261 | -15% |
| Fairfax (VA) | 3,311 | 838 | -75% | 1,808 | -45% | 0 | -100% | 3,133 | -5% |
| Dallas (TX) | 41,006 | 48,059 | 17% | 48,539 | 18% | 40,460 | -1% | 34,247 | -16% |

NOTE: New York City is in five counties: Bronx, King, New York, Queens, and Richmond.

northeastern and midwestern states to southern and western states. Variations of these options with smaller redistributive effects, as well as other approaches to increasing targeting, also are examined in this section.

Additional targeting could be achieved by strengthening the school eligibility provisions and by providing schools funds based on the number of poor children instead of the number of low-achieving students. However, changing targeting at the school level may require greater reliance on data from the free and reduced-price school level program; resulting in less targeting on the poorest students because this data uses a looser definition of poverty. Three options that could achieve better school level targeting are:

1. **Require districts to allocate funds to schools solely on the basis of poverty**. Based on data from five large urban districts, this option would improve targeting in three districts and lessen targeting in two districts.

Therefore, it may be preferable to permit districts the option of using either poverty or low achievement as the basis for school allocations.

2. **Replacing the current multistage targeting process with direct state allocations to schools using data on subsidized school lunches**. Under the option schools with poverty rates above the state or national poverty rate could be served. One estimate predicts that 34 percent of the schools currently participating would become ineligible whereas 32 percent of schools currently not served by Chapter 1 would be considered eligible.

3. **Serving only those schools above the state or national poverty average**. This option shares the same goals as option 2 and produces dramatic shifts. Funds would still first flow to the districts with the money concentrated on the poorest schools in those districts. Provisions to recapture funds from districts with no eligible schools would be needed.

## *School Poverty and Student Achievement*

Although the linkage between family income and student achievement is well documented, a growing body of evidence indicates that the concentration of poverty in a school exerts an independent influence on how well children perform academically. The Sustaining Effects Study found that the correlation between low family incomes and low student achievement was much greater for school attendance areas as a whole (.67) than for individual students (.30) (Wang, et. al., 1978). Whether they are poor or not, individual students tend to do worse in schools where large percentages of the student body are poor (Kennedy, Jung, & Orland, 1986). Most recently, the Prospects longitudinal study of Chapter 1 (Abt Associates, Inc., 1993) found that the average student in high-poverty schools (over 75 percent poor) had about the same achievement as the average Chapter 1 student in low-poverty schools (less than 20 percent poor).

Although some high-poverty schools are producing fine results, most are not. For example, the Prospects study found that in high-poverty schools, 65 percent of fourth-graders were low-achievers (scoring below the 35th percentile in reading) and only 5 percent were high-achievers (scoring above the 75th percentile). The learning gap for higher-order thinking skills is much greater. Whereas 52 percent of fourth-graders in high-poverty schools were able to understand word meanings (compared with 89 percent in low-poverty schools), only 16 percent were able to critically assess information (compared with 53 percent in low-poverty schools). Moreover, the achievement gap widens as students move through the grades. In high-poverty schools, average student achievement in reading fell from the 32nd percentile in the first grade to the 28th percentile in the fourth grade and the 22nd percentile in the eighth grade; math achievement showed similar patterns (Abt Associates, Inc., 1993).

To provide more intensive intervention and support for the children with the greatest needs and thereby to help close the achievement gap between high- and low-poverty schools, it is critical to target a greater share of Chapter 1 funds to the highest-poverty communities.

## *Options for Reform*

The 1988 reauthorization of the Elementary and Secondary Education Act identified increased targeting of federal resources to school districts and schools with high concentrations of children from low-income families as a major objective. However, this will require stronger measures than those specified in the Hawkins-Stafford Amendments.

This section discusses ways to increase targeting to counties, by directing more funds to high-poverty counties, and to schools, by changing the school eligibility rules.

## *County and District Targeting Options*

One way to increase targeting on high-poverty schools is by directing more funds to high-poverty counties. Although some low-poverty counties contain high-poverty schools, most high-poverty schools and districts are concentrated in mid- to high-poverty counties. Data from the 1990 census indicates that more than half of the school districts in the highest poverty quartile of districts are also in the highest poverty quartile of counties (where over 21 percent of school-age children are below the poverty line), and 80 percent of the poorest school districts are in the poorest two quartiles of counties (over 16 percent poor). Information on the relationship between district poverty and school poverty is provided by the 1987-88 Schools and Staffing Survey (NCES, 1988), which measures poverty levels using eligibility for the free or reduced-price lunch program. According to these data, high-poverty districts (with over 50 percent of students eligible for free or reduced-price lunches) contain 16 percent of all schools but 49 percent of the high-poverty schools (over 50 percent poor), and districts with poverty rates over 20 percent contain 93 percent of all high-poverty schools (Westat, 1993).

Six options to increase targeting at the county level are as follows:

1. Increasing the share of funds allocated through Concentration Grants,

2. Raising the Concentration Grant percentage threshold for eligibility,

3. Targeting Concentration Grants more intensively on high-poverty counties while raising the share of funds allocated through Concentration Grants,

4. Requiring communities to absorb the costs of serving the special needs of a certain percent of their poor children, and

5. Replacing the Basic and Concentration Grant formulas with a weighted-pupil formula that targets a greater proportion of funding to areas with high poverty rates.

Exhibit 6 provides a summary of the impact of these targeting options, using different thresholds, on the distribution of funds among high- and low-poverty counties and for the counties containing the 10 largest school districts.

## *Option 1: Increasing the Share of Funds Allocated Through the Existing Concentration Grant Provision*

**Rationale.** Concentration Grants are more strongly targeted on the highest-poverty counties and districts than are Basic Grants, but currently represent too small a percentage (11 percent) of the total appropriation for Basic and Concentration Grants to substantially affect the distribution of funds. Raising the share of funds allocated through Concentration Grants would be a simple way to increase funding to the highest-poverty counties. Here we examine four Concentration Grant funding levels: raising the Concentration Grant share to 20, 30, 50 and 75 percent.

**County-level impact.** Small increases in the Concentration Grant share would have a minimal effect on the share of funds received by the highest poverty quartile of counties (see exhibit 7). If the Concentration Grant share were nearly doubled — from the current

## Exhibit 6
## Options for Increased Targeting on High-Poverty Counties
## Effects on the Distribution of FY 1993 Funds Across Counties

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula: | | | | | |
| Basic Grants | 42% | 26% | 20% | 12% | 19% |
| Concentration Grants | 52% | 32% | 14% | 2% | 25% |
| Total grants | 43% | 26% | 20% | 11% | 20% |
| Raise Concentration Grant share to: | | | | | |
| 20% | 44% | 27% | 19% | 10% | 20% |
| 30% | 45% | 28% | 18% | 9% | 20% |
| 50% | 47% | 29% | 17% | 7% | 21% |
| 75% | 50% | 31% | 15% | 4% | 22% |
| Raise Concentration Grant percentage threshold for eligibility to: | | | | | |
| 18% | 44% | 26% | 19% | 11% | 19% |
| 25% | 45% | 25% | 19% | 11% | 20% |
| Raise Concentration Grant threshold and share: | | | | | |
| 18% threshold, 50% share | 50% | 28% | 15% | 7% | 22% |
| 25% threshold, 35% share | 50% | 24% | 17% | 9% | 23% |
| Apply consistent treatment of percent and number thresholds for Concentration Grants: | | | | | |
| Count all students in eligible counties | 43% | 26% | 20% | 11% | 19% |
| Count only students over thresholds | 44% | 26% | 20% | 11% | 20% |
| Use absorption formula with: | | | | | |
| 2% threshold | 44% | 26% | 20% | 10% | 19% |
| 4% threshold | 47% | 26% | 19% | 8% | 20% |
| 6% threshold | 50% | 27% | 18% | 5% | 21% |
| Use weighted pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | 46% | 26% | 20% | 9% | 20% |
| 10% threshold/½ pupil weight | 48% | 26% | 18% | 8% | 20% |
| 16% threshold/½ pupil weight | 49% | 24% | 17% | 10% | 21% |
| 18% threshold/½ pupil weight | 49% | 23% | 17% | 10% | 20% |

Exhibit reads: Several strategies are available to achieve roughly the same degree of targeting on high-poverty communities. Half of all Chapter 1 funds could be directed to the highest-poverty counties by: 1) raising the Concentration Grant share to 75%; 2) focusing Concentration Grants by raising the threshold to 18% and increasing the Concentration Grant share to 50%; 3) replacing Basic and Concentration Grants with an absorption formula that only counts poor children in excess of a 6% poverty threshold; or 4) replacing Basic and Concentration Grants with a weighted pupil formula that weights students below an 18% poverty threshold by one-half.



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**Exhibit 7**
**Raising the Concentration Grant Share**
**Effects on the Distribution of FY 1993 Funds Among Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | 43% | 26% | 20% | 11% | 20% |
| Raise Concentration Grant share to: | | | | | |
| 20% | 44% | 27% | 19% | 10% | 20% |
| 30% | 45% | 28% | 18% | 9% | 20% |
| 50% | 47% | 29% | 17% | 7% | 21% |
| 75% | 50% | 31% | 15% | 4% | 22% |

Exhibit reads: Increasing the share of funds allocated through the current Concentration Grant formula to 20 percent or 30 percent would have relatively small effects on targeting to the poorest counties. To direct half of the funds to the poorest quartile of counties, it would be necessary to raise the Concentration Grant share to 75 percent.

11 percent to 20 percent — the highest poverty quartile would receive only 1 percent more. At least half of the Chapter 1 appropriation must be distributed through the Concentration Grant formula to increase significantly (e.g., by four percentage points) the percentage of total funds allocated to these counties. To direct half of Chapter 1 funding to the highest poverty quartile, it would be necessary to raise the Concentration Grant share to 75 percent.

Raising the Concentration Grant share to 75 percent would substantially increase funding per poor child in high-poverty counties. For example, the 10 poorest counties in the nation would receive an increase from $661 per poor school-age child to $774 (see appendix A). The counties with the 10 largest school districts also would benefit, with

their share of total funding rising from 20 percent to 22 percent and their average allocation per poor student rising from $821 to $957 (see appendix B). Most of these counties' allocations would increase by 17 percent; however, Fairfax County, Virginia, would lose 75 percent of its funding (see exhibit 8).

**Exhibit 8**
**Raising the Concentration Grant Share**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula Concentration Share = 11 Percent | Concentration Share = 20 Percent | | Concentration Share = 30 Percent | | Concentration Share = 50 Percent | | Concentration Share = 75 Percent | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $376,494 | 2% | $386,199 | 5% | $406,716 | 11% | $431,112 | 17% |
| Los Angeles (CA) | 242,248 | 247,942 | 2% | 254,333 | 5% | 267,845 | 11% | 283,910 | 17% |
| Cook (IL) | 170,332 | 174,335 | 2% | 178,829 | 5% | 188,330 | 11% | 199,626 | 17% |
| Dade (FL) | 60,380 | 61,799 | 2% | 63,392 | 5% | 66,759 | 11% | 70,764 | 17% |
| Philadelphia (PA) | 75,952 | 77,738 | 2% | 79,742 | 5% | 83,978 | 11% | 89,015 | 17% |
| Harris (TX) | 76,051 | 77,838 | 2% | 79,844 | 5% | 84,086 | 11% | 89,130 | 17% |
| Wayne (MI) | 104,853 | 107,317 | 2% | 110,084 | 5% | 115,932 | 11% | 122,886 | 17% |
| Broward (FL) | 19,181 | 19,064 | -1% | 18,938 | -1% | 18,746 | -2% | 18,438 | -4% |
| Fairfax (VA) | 3,311 | 2,962 | -11% | 2,573 | -22% | 1,808 | -45% | 838 | -75% |
| Dallas (TX) | 41,006 | 41,970 | 2% | 43,052 | 5% | 45,339 | 11% | 48,059 | 17% |

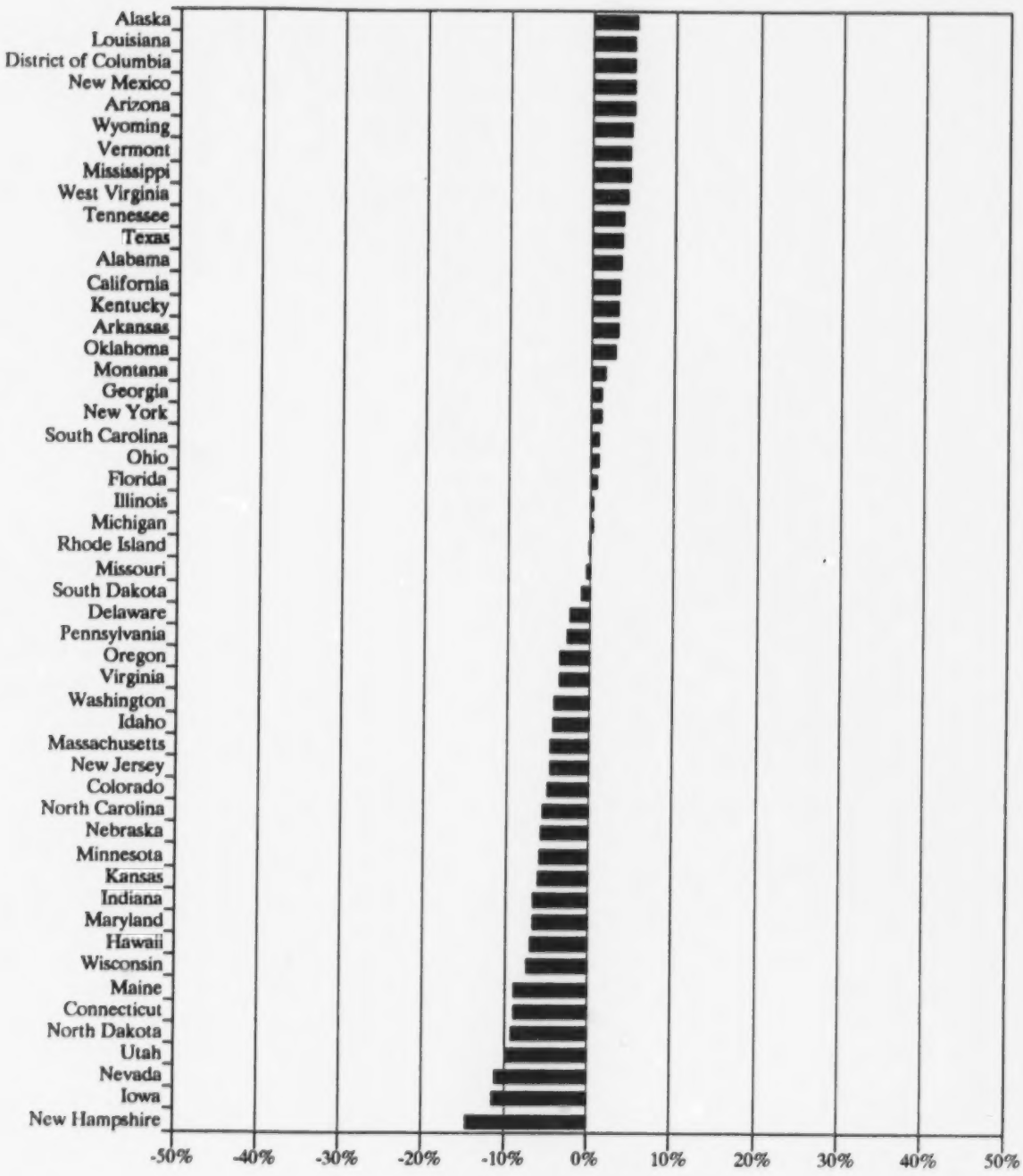
**State-level impact.** States that would have the largest gains are those with the highest child poverty rates, most of which are located in the Sun Belt (Alabama, Arkansas, District of Columbia, Kentucky, Louisiana, Mississippi, New Mexico, Texas, and West Virginia). Relatively affluent states that have "pockets of poverty" would receive large increases for these areas despite a reduction in funding for the state as a whole. For example, Suffolk County (which includes Boston) would gain 17 percent if the Concentration Grant share were raised to 75 percent, even though Massachusetts would lose 15 percent (see exhibits 9, 10, and 11).

## Exhibit 9
## Raising the Concentration Grant Share
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula Concentration Share = 11 Percent | Concentration Share = 20 Percent | | Concentration Share = 30 Percent | | Concentration Share = 50 Percent | | Concentration Share = 75 Percent | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $116,559 | 2% | $118,633 | 3% | $123,130 | 7% | $128,357 | 12% |
| Alaska | 11,364 | 11,768 | 4% | 11,968 | 5% | 9,860 | -13% | 7,174 | -37% |
| Arizona | 91,258 | 93,384 | 2% | 95,770 | 5% | 100,817 | 10% | 106,816 | 17% |
| Arkansas | 68,379 | 69,384 | 1% | 70,519 | 3% | 72,996 | 7% | 75,857 | 11% |
| California | 664,724 | 675,185 | 2% | 686,978 | 3% | 712,584 | 7% | 742,310 | 12% |
| Colorado | 62,334 | 60,874 | -2% | 59,263 | -5% | 56,240 | -10% | 52,238 | -16% |
| Connecticut | 47,114 | 45,119 | -4% | 42,911 | -9% | 38,647 | -18% | 33,145 | -30% |
| Delaware | 12,128 | 12,464 | 3% | 11,831 | -2% | 9,632 | -21% | 6,832 | -44% |
| District of Columbia | 18,083 | 18,508 | 2% | 18,985 | 5% | 19,994 | 11% | 21,193 | 17% |
| Florida | 269,056 | 270,002 | 0% | 271,118 | 1% | 274,178 | 2% | 277,066 | 3% |
| Georgia | 156,652 | 157,554 | 1% | 158,594 | 1% | 161,155 | 3% | 163,813 | 5% |
| Hawaii | 16,689 | 16,006 | -4% | 15,543 | -7% | 14,668 | -12% | 13,516 | -19% |
| Idaho | 19,851 | 19,438 | -2% | 18,983 | -4% | 18,136 | -9% | 17,007 | -14% |
| Illinois | 283,664 | 284,089 | 0% | 284,627 | 0% | 286,580 | 1% | 288,031 | 2% |
| Indiana | 96,244 | 93,223 | -3% | 89,883 | -7% | 83,514 | -13% | 75,203 | -22% |
| Iowa | 45,180 | 42,723 | -5% | 39,999 | -11% | 34,700 | -23% | 27,908 | -38% |
| Kansas | 45,272 | 43,963 | -3% | 42,517 | -6% | 39,770 | -12% | 36,172 | -20% |
| Kentucky | 106,263 | 107,871 | 2% | 109,685 | 3% | 113,635 | 7% | 118,208 | 11% |
| Louisiana | 173,254 | 177,327 | 2% | 181,897 | 5% | 191,561 | 11% | 203,051 | 17% |
| Maine | 22,174 | 21,177 | -4% | 20,202 | -9% | 18,325 | -17% | 15,897 | -28% |
| Maryland | 77,405 | 74,944 | -3% | 72,224 | -7% | 67,033 | -13% | 60,263 | -22% |
| Massachusetts | 109,157 | 106,711 | -2% | 104,015 | -5% | 98,970 | -9% | 92,271 | -15% |
| Michigan | 266,081 | 266,411 | 0% | 266,839 | 0% | 268,518 | 1% | 269,688 | 1% |
| Minnesota | 74,623 | 72,563 | -3% | 70,289 | -6% | 65,979 | -12% | 60,323 | -19% |
| Mississippi | 114,058 | 116,449 | 2% | 119,136 | 4% | 124,855 | 9% | 131,614 | 15% |
| Missouri | 108,002 | 107,797 | 0% | 107,593 | 0% | 107,520 | 0% | 107,052 | -1% |
| Montana | 23,514 | 23,695 | 1% | 23,903 | 2% | 24,390 | 4% | 24,917 | 6% |
| Nebraska | 27,211 | 26,473 | -3% | 25,658 | -6% | 24,116 | -11% | 22,090 | -19% |
| Nevada | 16,133 | 15,153 | -6% | 14,323 | -11% | 12,715 | -21% | 10,669 | -34% |
| New Hampshire | 12,838 | 12,471 | -3% | 10,954 | -15% | 7,944 | -38% | 4,131 | -68% |
| New Jersey | 126,570 | 123,728 | -2% | 120,595 | -5% | 114,731 | -9% | 106,947 | -16% |
| New Mexico | 54,082 | 55,344 | 2% | 56,759 | 5% | 59,754 | 10% | 63,314 | 17% |
| New York | 556,321 | 559,370 | 1% | 562,891 | 1% | 571,645 | 3% | 580,654 | 4% |
| North Carolina | 118,303 | 115,200 | -3% | 111,776 | -6% | 105,304 | -11% | 96,788 | -18% |
| North Dakota | 15,180 | 14,240 | -6% | 13,778 | -9% | 12,877 | -15% | 11,700 | -23% |
| Ohio | 255,370 | 256,369 | 0% | 257,540 | 1% | 260,668 | 2% | 263,690 | 3% |
| Oklahoma | 76,415 | 77,445 | 1% | 78,608 | 3% | 81,168 | 6% | 84,105 | 10% |
| Oregon | 58,099 | 57,096 | -2% | 55,994 | -4% | 53,974 | -7% | 51,241 | -12% |
| Pennsylvania | 275,687 | 272,132 | -1% | 268,241 | -3% | 261,324 | -5% | 251,701 | -9% |
| Rhode Island | 19,022 | 19,012 | 0% | 19,004 | 0% | 19,049 | 0% | 19,038 | 0% |
| South Carolina | 84,348 | 84,705 | 0% | 85,122 | 1% | 86,215 | 2% | 87,289 | 3% |
| South Dakota | 17,038 | 16,948 | -1% | 16,851 | -1% | 16,712 | -2% | 16,477 | -3% |
| Tennessee | 110,730 | 112,671 | 2% | 114,855 | 4% | 119,561 | 8% | 125,063 | 13% |
| Texas | 532,606 | 541,804 | 2% | 552,161 | 4% | 574,492 | 8% | 600,581 | 13% |
| Utah | 29,338 | 27,981 | -5% | 26,478 | -10% | 23,567 | -20% | 19,821 | -32% |
| Vermont | 10,942 | 11,160 | 2% | 11,439 | 5% | 8,999 | -18% | 5,883 | -46% |
| Virginia | 92,885 | 91,252 | -2% | 89,458 | -4% | 86,161 | -7% | 81,709 | -12% |
| Washington | 84,666 | 82,936 | -2% | 81,030 | -4% | 77,488 | -8% | 72,757 | -14% |
| West Virginia | 60,076 | 61,276 | 2% | 62,625 | 4% | 65,504 | 9% | 68,898 | 15% |
| Wisconsin | 106,997 | 103,204 | -4% | 99,008 | -7% | 90,963 | -15% | 80,516 | -25% |
| Wyoming | 11,527 | 11,903 | 3% | 12,072 | 5% | 10,035 | -13% | 7,436 | -35% |

## Exhibit 10

## Effects of Raising the Concentration Grant Share to 30 Percent

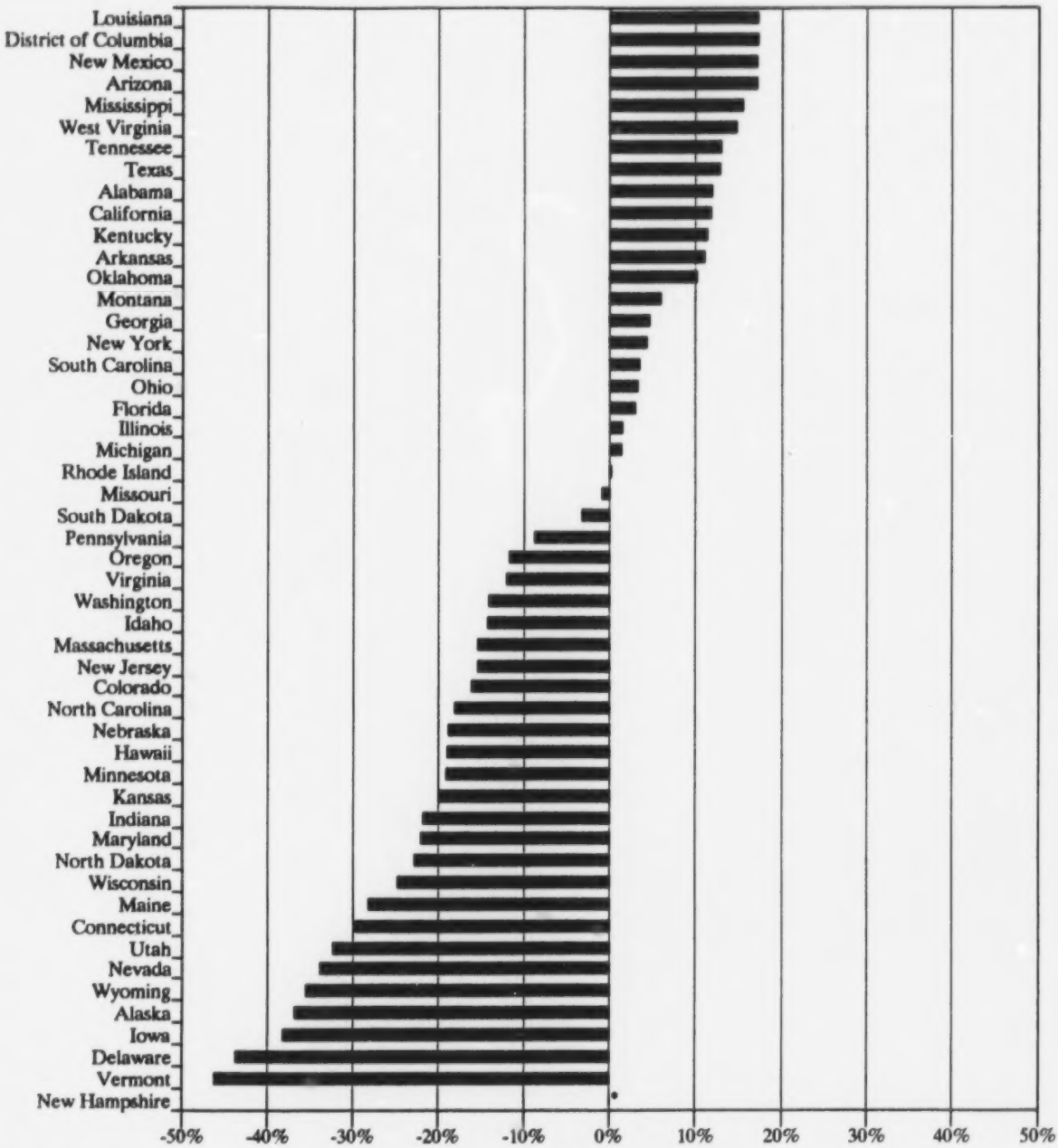



**Percentage Change in FY 1993 Allocations**

Exhibit reads: Raising the proportion of funds allocated through the existing Concentration Grant formula to 30 percent would increase funding to Alaska by 5 percent while reducing New Hampshire's funding by 15 percent.

## Exhibit 11

## Effects of Raising the Concentration Grant Share to 75 Percent




**Percentage Change in FY 1993 Allocations**

Exhibit reads: Raising the proportion of funds allocated through the existing Concentration Grant formula to 75 percent would increase funding to Louisiana by 17 percent while reducing New Hampshire's funding by 68 percent.

* Value is off the chart: New Hampshire is -68%.

Losing states would tend to outnumber gainers, and the losses would be of greater magnitude than the gains. If the Concentration Grant share were raised to 30 percent, 6 states and the District of Columbia each would gain 5 percent while 18 states would have funding reductions ranging from 5 percent to 11 percent. With larger increases in the share, the losses would become more dramatic: at a 75 percent share, 16 states would lose between 20 percent and 68 percent of their funding, while the maximum gain would be 17 percent (4 states). Many of the states with the largest losses would be those that now fall under the "small state" minimum for Basic Grants (Alaska, Delaware, New Hampshire, North Dakota, Vermont, and Wyoming), with losses ranging from 23 percent to 68 percent. These extreme losses could be avoided with little impact on other states by adjusting the provisions for calculating the state minimum.

## *Option 2: Raising the Concentration Grant Percentage Threshold for Eligibility*

**Rationale**. Counties receive Concentration Grants when their population of formula-eligible children exceeds 6,500 children (number threshold) or 15 percent of children ages 5-17 in the county (percentage threshold). Under these thresholds, 66 percent of the nation's counties currently qualify for Concentration Grants, and 80 percent of all children counted in the Basic Grant formula live in counties that also receive funds under the Concentration Grant formula. Thus, some observers have argued Concentration Grants are not very concentrated (Barro, 1991). The most effective way to increase the targeting of Concentration Grants would be to raise the county percentage threshold. This would increase the degree of concentration, since fewer counties would be eligible. This section

examines the effects of raising the percentage threshold first, to 18 percent, the national child poverty rate, and then to 25 percent.

**County-level impact.** Although raising the percentage threshold would substantially increase the targeting of Concentration Grant funds, it would have a much smaller effect on the distribution of total funding because only 11 percent of the funds are allocated through the Concentration formula (see exhibit 12). Raising the percentage threshold to 18 percent would increase funding to the highest poverty quartile by one percentage

**Exhibit 12**
**Raising the Concentration Grant Percentage Threshold**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second - Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | | | | | |
| Basic Grants | 42% | 26% | 20% | 12% | 19% |
| Concentration Grants | 52% | 32% | 14% | 2% | 25% |
| Total grants | 43% | 26% | 20% | 11% | 20% |
| Raise threshold to 18% | | | | | |
| Concentration Grants | 58% | 30% | 9% | 2% | 26% |
| Total grants | 44% | 26% | 19% | 11% | 19% |
| Raise threshold to 25% | | | | | |
| Concentration Grants | 65% | 20% | 12% | 3% | 31% |
| Total grants | 45% | 25% | 19% | 11% | 20% |

Exhibit reads: Raising the Concentration Grant percentage threshold would target these funds more strongly on the poorest counties; however, the impact on the distribution of total Chapter 1 funds would be minimal because Concentration Grants currently distribute only 10 percent of the funds.

point, to 44 percent. Raising the threshold to 25 percent would increase this quartile's share of funding to 45 percent.

Raising the threshold to 25 percent would have less effect than raising the share of funds allocated through the Concentration Grants to 75 percent. The amount received by the 10 poorest counties in the nation would increase from $661 per poor school-age child to $697 (see Appendix A), while the amount received by counties with the largest school districts would increase from $821 to $860 (see Appendix B). For these large counties, total allocations would increase by no more than 5 percent (see exhibit 13).

**Exhibit 13**
**Raising the Concentration Grant Percentage Threshold**
**Effects on FY 1993 Allocations for the Counties**
**Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula | Raise Threshold from 15% to 18% | | Raise Threshold from 15% to 25% | |
|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $372,747 | 1% | $385,352 | 5% |
| Los Angeles (CA) | 242,248 | 246,092 | 2% | 254,474 | 5% |
| Cook (IL) | 170,332 | 173,035 | 2% | 178,496 | 5% |
| Dade (FL) | 60,380 | 61,338 | 2% | 62,678 | 4% |
| Philadelphia (PA) | 75,952 | 77,158 | 2% | 80,053 | 5% |
| Harris (TX) | 76,051 | 77,258 | 2% | 79,332 | 4% |
| Wayne (MI) | 104,853 | 106,517 | 2% | 110,513 | 5% |
| Broward (FL) | 19,181 | 19,416 | 1% | 19,979 | 4% |
| Fairfax (VA) | 3,311 | 3,311 | 0% | 3,311 | 0% |
| Dallas (TX) | 41,006 | 41,657 | 2% | 42,396 | 3% |

**State-level impact.** Funding shifts among states would be generally small (see exhibit 14). If the threshold were raised to 18 percent, the District of Columbia would be the largest gainer in percentage terms, with a 2 percent gain, while 8 states (Indiana, Kansas,

## Exhibit 14
## Raising the Concentration Grant Percentage Threshold
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Raise Threshold from 15% to 18% | | Raise Threshold from 15% to 25% | |
|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $115,245 | 0% | $111,810 | -3% |
| Alaska | 11,364 | 11,386 | 0% | 11,442 | 1% |
| Arizona | 91,258 | 91,786 | 1% | 93,027 | 2% |
| Arkansas | 68,379 | 68,738 | 1% | 67,667 | -1% |
| California | 664,724 | 670,536 | 1% | 683,655 | 3% |
| Colorado | 62,334 | 62,617 | 0% | 62,017 | -1% |
| Connecticut | 47,114 | 47,480 | 1% | 48,360 | 3% |
| Delaware | 12,128 | 12,128 | 0% | 12,128 | 0% |
| District of Columbia | 18,083 | 18,370 | 2% | 17,883 | -1% |
| Florida | 269,056 | 267,844 | 0% | 266,373 | -1% |
| Georgia | 156,652 | 156,864 | 0% | 157,149 | 0% |
| Hawaii | 16,689 | 16,689 | 0% | 16,689 | 0% |
| Idaho | 19,851 | 19,779 | 0% | 19,779 | 0% |
| Illinois | 283,664 | 284,559 | 0% | 286,367 | 1% |
| Indiana | 96,244 | 93,814 | -3% | 93,369 | -3% |
| Iowa | 45,180 | 44,530 | -1% | 44,449 | -2% |
| Kansas | 45,272 | 44,566 | -2% | 43,709 | -3% |
| Kentucky | 106,263 | 106,877 | 1% | 104,489 | -2% |
| Louisiana | 173,254 | 175,195 | 1% | 176,288 | 2% |
| Maine | 22,174 | 22,174 | 0% | 22,174 | 0% |
| Maryland | 77,405 | 78,026 | 1% | 78,840 | 2% |
| Massachusetts | 109,157 | 110,273 | 1% | 111,778 | 2% |
| Michigan | 266,081 | 265,837 | 0% | 263,080 | -1% |
| Minnesota | 74,623 | 72,884 | -2% | 72,429 | -3% |
| Mississippi | 114,058 | 115,707 | 1% | 118,367 | 4% |
| Missouri | 108,002 | 107,219 | -1% | 105,936 | -2% |
| Montana | 23,514 | 22,741 | -3% | 22,417 | -5% |
| Nebraska | 27,211 | 26,666 | -2% | 26,666 | -2% |
| Nevada | 16,133 | 16,133 | 0% | 16,309 | 1% |
| New Hampshire | 12,838 | 12,838 | 0% | 12,838 | 0% |
| New Jersey | 126,570 | 125,707 | -1% | 125,042 | -1% |
| New Mexico | 54,082 | 54,657 | 1% | 55,175 | 2% |
| New York | 556,321 | 555,854 | 0% | 569,374 | 2% |
| North Carolina | 118,303 | 118,074 | 0% | 114,833 | -3% |
| North Dakota | 15,180 | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 252,423 | -1% | 248,439 | -3% |
| Oklahoma | 76,415 | 76,157 | 0% | 74,228 | -3% |
| Oregon | 58,099 | 55,607 | -4% | 54,419 | -6% |
| Pennsylvania | 275,687 | 273,218 | -1% | 271,526 | -2% |
| Rhode Island | 19,022 | 18,622 | -2% | 18,681 | -2% |
| South Carolina | 84,348 | 84,013 | 0% | 82,594 | -2% |
| South Dakota | 17,038 | 16,940 | -1% | 16,940 | -1% |
| Tennessee | 110,730 | 109,059 | -2% | 105,739 | -5% |
| Texas | 532,606 | 538,981 | 1% | 538,877 | 1% |
| Utah | 29,338 | 29,326 | 0% | 29,331 | 0% |
| Vermont | 10,942 | 10,942 | 0% | 10,942 | 0% |
| Virginia | 92,885 | 92,734 | 0% | 90,240 | -3% |
| Washington | 84,666 | 84,049 | -1% | 83,512 | -1% |
| West Virginia | 60,076 | 60,073 | 0% | 58,335 | -3% |
| Wisconsin | 106,997 | 106,978 | 0% | 107,203 | 0% |
| Wyoming | 11,527 | 11,527 | 0% | 11,527 | 0% |

Minnesota, Montana, Nebraska, Oregon, Rhode Island, and Tennessee) would lose between 2 and 4 percent; 42 states would gain or lose to more than 1 percent. Even if the threshold were raised to 25 percent, 23 states still would gain or lose no more than 1 percent; the largest gain would be 4 percent (Mississippi) and the largest loss 6 percent (Oregon).

## *Option 3: Targeting Concentration Grants More Intensively On High-Poverty Counties While Raising the Share of Funds Allocated Through Concentration Grants*

**Rationale.** Increasing the targeting of Concentration Grants would have little effect on overall targeting because Concentration Grants provide a small share of funding; similarly, raising the Concentration Grant share, by itself, would have little effect unless the share was raised to a very high level. Combining these two options, however, could achieve a substantial increase in the targeting of the Chapter 1 program on the poorest counties. Here we explore two versions of this approach, each of which would direct one-half of all Chapter 1 funds to the highest poverty quartile of counties:

1. Raise the percentage threshold for Concentration Grants to 18 percent (the national poverty rate for school-age children) and raise the Concentration Grant share to 50 percent; or

2. Raise the percentage threshold for Concentration Grants to 25 percent and raise the Concentration Grant share to 35 percent.

**County-level impact.** Both approaches would raise the share of total funds in the highest poverty quartile to 50 percent. However, the first approach (raising the

percentage threshold to 18 percent and the grant share to 50 percent) would also have a favorable impact on the second-highest poverty quartile and would only shift funding away from the two least-poor quartiles. The second approach (25 percent threshold, 35 percent share) would reduce the share of funding to the second-highest poverty quartile from 28 percent to 26 percent (see exhibit 15).

**Exhibit 15**
**Raising the Concentration Grant Percentage Threshold and Share of Total Funding Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | | | | | |
| Basic Grants | 42% | 26% | 20% | 12% | 19% |
| Concentration Grants | 52% | 32% | 14% | 2% | 25% |
| Total grants | 43% | 26% | 20% | 11% | 20% |
| Raise threshold to 18%, share to 50% | | | | | |
| Concentration Grants | 57% | 31% | 10% | 2% | 27% |
| Total grants | 50% | 28% | 15% | 7% | 22% |
| Raise threshold to 25%, share to 35% | | | | | |
| Concentration Grants | 64% | 21% | 12% | 3% | 32% |
| Total grants | 50% | 24% | 17% | 9% | 23% |

Exhibit reads: Targeting Concentration Grants more intensively on high-poverty counties while raising the share of funds allocated through Concentration Grants could increase funding to the highest-poverty counties from the current rate of 43 percent to 50 percent.

Both combinations of increasing targeting and concentration shares would have a substantial impact on the 10 poorest counties and 10 counties with the largest school

districts. The 25 percent threshold and 35 percent share option would raise the grant to the 10 poorest counties from $661 to $823 per poor school-age child (see Appendix A). The amount for counties with the 10 largest school districts would increase from $821 to $1,003. Most of these large counties would receive approximately 20 percent more in total funding; Fairfax County, Virginia, however, would receive 28 percent less (see Exhibit 16).

**Exhibit 16**
**Raising the Concentration Grant Percentage Threshold and Share of Total Funding**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula | Threshold = 18% Share = 50% Allocation | Change | Threshold = 25% Share = 35% Allocation | Change |
|---|---|---|---|---|---|
| New York (NY) | $367,848 | $430,993 | 17% | $450,361 | 22% |
| Los Angeles (CA) | 242,248 | 286,749 | 18% | 298,891 | 23% |
| Cook (IL) | 170,332 | 201,622 | 18% | 208,735 | 23% |
| Dade (FL) | 60,380 | 71,471 | 18% | 72,027 | 19% |
| Philadelphia (PA) | 75,952 | 89,905 | 18% | 94,593 | 25% |
| Harris (TX) | 76,051 | 90,021 | 18% | 91,998 | 21% |
| Wayne (MI) | 104,853 | 124,115 | 18% | 130,586 | 25% |
| Broward (FL) | 19,181 | 19,900 | 4% | 21,573 | 12% |
| Fairfax (VA) | 3,311 | 1,808 | -45% | 2,380 | -28% |
| Dallas (TX) | 41,006 | 48,539 | 18% | 48,353 | 18% |

**State-level impact.** Losers would outnumber gainers under both approaches, with 32 states losing funds under the first approach (18 percent threshold, 50 percent share) and 38 states losing funds under the second approach (25 percent threshold, 35 percent share). However, the magnitude of gains and losses would tend to be larger under the

first approach, with 12 states losing 20 to 38 percent, compared with 8 states losing 20 to 26 percent under the second approach (see exhibits 17 and 18).

## *Option 4: Applying Consistent Treatment of the Percentage and Number Thresholds for Concentration Grants*

**Rationale.** Under the current formula, counties that qualify for Concentration Grants under the number threshold (at least 6,500 poor children) are treated differently from counties that qualify under the percentage threshold (at least 15 percent poor children). All poor children in counties with more than 15 percent poor children, are counted in the Concentration formula, whereas in counties that are less than 15 percent poor but have more than 6,500 poor children, only those children over the 6,500 threshold are counted. This inconsistent treatment of the two thresholds could be considered unfair to counties that qualify under the number threshold, many of which are large urban counties that contain both affluent areas and high-poverty areas. Most counties that receive Concentration Grants qualify under the percentage threshold. Consistent treatment of all Concentration Grant counties could be achieved in two ways:

1. Count all poor students in eligible counties; or
2. Count only those poor students in excess of the threshold, using whichever threshold provides the larger count of poor students.

**County-level impact**. Because most Concentration Grant counties currently qualify under the percentage threshold (2,055 out of 2,108 counties in FY 1993), changing the treatment of the number threshold (by counting all poor students in eligible counties)

## Exhibit 17
## Raising the Concentration Grant Percentage Threshold and Share of Total Funding
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Threshold = 18% Share = 50% Allocation | Change | Threshold = 25% Share = 35% Allocation | Change |
|---|---|---|---|---|---|
| Alabama | $114,719 | $125,957 | 10% | $110,534 | -4% |
| Alaska | 11,364 | 9,961 | -12% | 11,681 | 3% |
| Arizona | 91,258 | 103,598 | 14% | 103,185 | 13% |
| Arkansas | 68,379 | 74,895 | 10% | 69,011 | 1% |
| California | 664,724 | 741,994 | 12% | 757,997 | 14% |
| Colorado | 62,334 | 57,701 | -7% | 57,591 | -8% |
| Connecticut | 47,114 | 40,450 | -14% | 46,028 | -2% |
| Delaware | 12,128 | 8,079 | -33% | 10,331 | -15% |
| District of Columbia | 18,083 | 21,405 | 18% | 18,638 | 3% |
| Florida | 269,056 | 269,196 | 0% | 263,805 | -2% |
| Georgia | 156,652 | 162,590 | 4% | 161,336 | 3% |
| Hawaii | 16,689 | 15,468 | -7% | 14,734 | -12% |
| Idaho | 19,851 | 13,794 | -31% | 15,309 | -23% |
| Illinois | 283,664 | 291,554 | 3% | 294,831 | 4% |
| Indiana | 96,244 | 72,237 | -25% | 78,981 | -18% |
| Iowa | 45,180 | 31,690 | -30% | 34,001 | -25% |
| Kansas | 45,272 | 36,530 | -19% | 36,760 | -19% |
| Kentucky | 106,263 | 116,848 | 10% | 105,161 | -1% |
| Louisiana | 173,254 | 201,267 | 16% | 194,927 | 13% |
| Maine | 22,174 | 13,972 | -37% | 16,522 | -25% |
| Maryland | 77,405 | 70,102 | -9% | 75,801 | -2% |
| Massachusetts | 109,157 | 104,460 | -4% | 111,629 | 2% |
| Michigan | 266,081 | 268,077 | 1% | 258,106 | -3% |
| Minnesota | 74,623 | 57,928 | -22% | 62,117 | -17% |
| Mississippi | 114,058 | 132,990 | 17% | 135,173 | 19% |
| Missouri | 108,002 | 104,107 | -4% | 101,052 | -6% |
| Montana | 23,514 | 20,814 | -11% | 18,492 | -21% |
| Nebraska | 27,211 | 19,451 | -29% | 21,330 | -22% |
| Nevada | 16,133 | 13,216 | -18% | 15,198 | -6% |
| New Hampshire | 12,838 | 7,944 | -38% | 10,196 | -21% |
| New Jersey | 126,570 | 110,926 | -12% | 114,351 | -10% |
| New Mexico | 54,082 | 62,638 | 16% | 61,301 | 13% |
| New York | 556,321 | 570,984 | 3% | 609,780 | 10% |
| North Carolina | 118,303 | 104,458 | -12% | 98,945 | -16% |
| North Dakota | 15,180 | 11,971 | -21% | 11,895 | -22% |
| Ohio | 255,370 | 247,473 | -3% | 236,195 | -8% |
| Oklahoma | 76,415 | 80,179 | 5% | 72,276 | -5% |
| Oregon | 58,099 | 42,353 | -27% | 43,262 | -26% |
| Pennsylvania | 275,687 | 250,322 | -9% | 253,441 | -8% |
| Rhode Island | 19,022 | 15,888 | -16% | 17,942 | -6% |
| South Carolina | 84,348 | 84,866 | 1% | 79,851 | -5% |
| South Dakota | 17,038 | 15,095 | -11% | 15,621 | -8% |
| Tennessee | 110,730 | 112,024 | 1% | 99,930 | -10% |
| Texas | 532,606 | 606,178 | 14% | 580,192 | 9% |
| Utah | 29,338 | 23,556 | -20% | 25,769 | -12% |
| Vermont | 10,942 | 8,239 | -25% | 10,196 | -7% |
| Virginia | 92,885 | 85,655 | -8% | 80,116 | -14% |
| Washington | 84,666 | 74,761 | -12% | 76,521 | -10% |
| West Virginia | 60,076 | 65,678 | 9% | 57,804 | -4% |
| Wisconsin | 106,997 | 91,064 | -15% | 97,860 | -9% |
| Wyoming | 11,527 | 9,773 | -15% | 10,452 | -9% |

## Exhibit 18

## Effects of Raising Concentration Grant Percentage Threshold to 18 Percent and the Share to 50 Percent

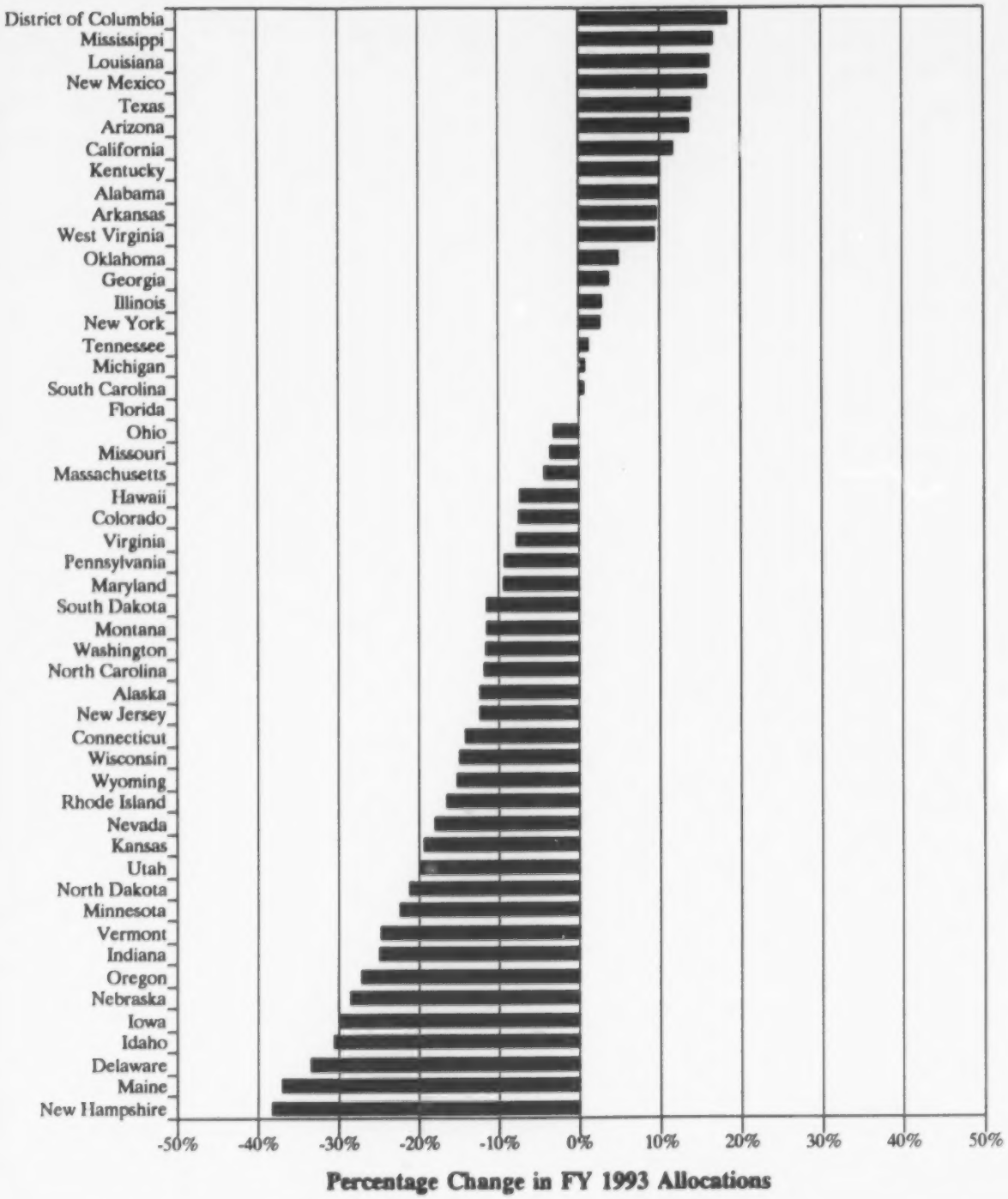



Exhibit reads: Raising the Concentration Grant percentage threshold to 18 percent and the share to 50 percent would increase funding to District of Columbia by 18 percent while reducing New Hampshire's funding by 38 percent.

would have little effect on the distribution of funds among counties (see exhibit 19). However, changing the treatment of the percentage threshold (by counting only students in excess of the thresholds) would increase the share of funds in the highest poverty quartile from 43 percent to 45 percent.

**Exhibit 19**
**Consistent Treatment of the Percentage and Number Thresholds for Concentration Grants**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | | | | | |
| Basic Grants | 42% | 26% | 20% | 12% | 19% |
| Concentration Grants | 52% | 32% | 14% | 2% | 25% |
| Total grants | 43% | 26% | 20% | 11% | 20% |
| Count all students in eligible counties | | | | | |
| Concentration Grants | 50% | 30% | 16% | 4% | 22% |
| Total Grants | 43% | 26% | 20% | 11% | 19% |
| Count only students over thresholds | | | | | |
| Concentration Grants | 57% | 27% | 13% | 3% | 34% |
| Total Grants | 45% | 26% | 20% | 11% | 20% |

Exhibit reads: Counting only poor children in excess of the percentage threshold (as the formula currently does for counties that qualify under the number threshold) would produce a slight increase in targeting on the highest-poverty counties, while counting all poor children in eligible counties would have little effect on the distribution of funds.

Counting only students in excess of either threshold would produce marginal increases in funding per poor child in high-poverty counties. For example, the amount received by the 10 poorest counties in the nation would rise from $661 per poor school-age child to $679 (see Appendix A). The amount received by counties with the 10 largest districts would

rise from $821 to $871 (see Appendix B). The total amount of funding for these counties would increase from 5 to 7 percent, with the exception of Fairfax County, Virginia, which would remain constant (see exhibit 20).

**Exhibit 20**
**Consistent Treatment of Percentage and Number Thresholds for Concentration Grants**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula | Count All Students in Eligible Counties | | Count Only Students Over the Thresholds | |
|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $365,091 | -1% | $388,381 | 6% |
| Los Angeles (CA) | 242,248 | 240,432 | -1% | 259,105 | 7% |
| Cook (IL) | 170,332 | 169,055 | -1% | 181,708 | 7% |
| Dade (FL) | 60,380 | 59,927 | -1% | 63,755 | 6% |
| Philadelphia (PA) | 75,952 | 75,383 | -1% | 80,234 | 6% |
| Harris (TX) | 76,051 | 75,481 | -1% | 80,729 | 6% |
| Wayne (MI) | 104,853 | 104,067 | -1% | 111,337 | 6% |
| Broward (FL) | 19,181 | 19,719 | 3% | 20,267 | 6% |
| Fairfax (VA) | 3,311 | 3,311 | 0% | 3,311 | 0% |
| Dallas (TX) | 41,006 | 40,699 | -1% | 43,110 | 5% |

**State-level impact.** Again, changing the treatment of counties that qualify under the number threshold would have fairly small redistributive effects; only 4 states (Connecticut, Delaware, Massachusetts, and Utah), would see their allocation change by more than 2 percent all these states would benefit (see exhibit 21).

Counting only students in excess of the thresholds would produce larger shifts, with gains of 5 to 10 percent in Connecticut, Nevada, Massachusetts, Mississippi, and Utah; the largest percentage losses would occur in Oregon (6 percent) and Ohio (5 percent). Still, 27 states would gain or lose no more than 1 percent.

## Exhibit 21
## Consistent Treatment of Percentage and Number Thresholds for Concentration Grants
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Count All Students in Eligible Counties | | Count Only Students Over the Thresholds | |
|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $113,909 | -1% | $111,253 | -3% |
| Alaska | 11,364 | 11,360 | 0% | 11,360 | 0% |
| Arizona | 91,258 | 90,575 | -1% | 92,467 | 1% |
| Arkansas | 68,379 | 67,901 | -1% | 65,846 | -4% |
| California | 664,724 | 663,490 | 0% | 690,714 | 4% |
| Colorado | 62,334 | 63,310 | 2% | 61,017 | -2% |
| Connecticut | 47,114 | 49,323 | 5% | 48,810 | 4% |
| Delaware | 12,128 | 12,865 | 6% | 12,128 | 0% |
| District of Columbia | 18,083 | 17,948 | -1% | 18,114 | 0% |
| Florida | 269,056 | 269,946 | 0% | 269,192 | 0% |
| Georgia | 156,652 | 156,204 | 0% | 152,029 | -3% |
| Hawaii | 16,689 | 16,951 | 2% | 16,689 | 0% |
| Idaho | 19,851 | 19,779 | 0% | 19,779 | 0% |
| Illinois | 283,664 | 281,900 | -1% | 290,009 | 2% |
| Indiana | 96,244 | 95,829 | 0% | 94,299 | -2% |
| Iowa | 45,180 | 45,639 | 1% | 44,449 | -2% |
| Kansas | 45,272 | 45,686 | 1% | 43,549 | -4% |
| Kentucky | 106,263 | 105,518 | -1% | 102,838 | -3% |
| Louisiana | 173,254 | 171,956 | -1% | 171,108 | -1% |
| Maine | 22,174 | 22,174 | 0% | 22,174 | 0% |
| Maryland | 77,405 | 78,661 | 2% | 78,591 | 2% |
| Massachusetts | 109,157 | 112,600 | 3% | 111,729 | 2% |
| Michigan | 266,081 | 266,668 | 0% | 266,703 | 0% |
| Minnesota | 74,623 | 74,942 | 0% | 72,969 | -2% |
| Mississippi | 114,058 | 113,220 | -1% | 112,187 | -2% |
| Missouri | 108,002 | 107,942 | 0% | 105,711 | -2% |
| Montana | 23,514 | 23,359 | -1% | 22,417 | -5% |
| Nebraska | 27,211 | 27,087 | 0% | 26,666 | -2% |
| Nevada | 16,133 | 16,460 | 2% | 16,450 | 2% |
| New Hampshire | 12,838 | 12,838 | 0% | 12,838 | 0% |
| New Jersey | 126,570 | 126,753 | 0% | 126,254 | 0% |
| New Mexico | 54,082 | 53,677 | -1% | 52,726 | -3% |
| New York | 556,321 | 556,704 | 0% | 574,426 | 3% |
| North Carolina | 118,303 | 118,885 | 0% | 114,176 | -3% |
| North Dakota | 15,180 | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 254,398 | 0% | 251,014 | -2% |
| Oklahoma | 76,415 | 75,886 | -1% | 73,784 | -3% |
| Oregon | 58,099 | 58,517 | 1% | 55,094 | -5% |
| Pennsylvania | 275,687 | 276,585 | 0% | 274,145 | -1% |
| Rhode Island | 19,022 | 18,906 | -1% | 18,861 | -1% |
| South Carolina | 84,348 | 84,344 | 0% | 80,365 | -5% |
| South Dakota | 17,038 | 16,940 | -1% | 16,940 | -1% |
| Tennessee | 110,730 | 109,939 | -1% | 106,336 | -4% |
| Texas | 532,606 | 529,362 | -1% | 537,059 | 1% |
| Utah | 29,338 | 30,296 | 3% | 29,587 | 1% |
| Vermont | 10,942 | 10,942 | 0% | 10,942 | 0% |
| Virginia | 92,885 | 92,410 | -1% | 89,136 | -4% |
| Washington | 84,666 | 86,130 | 2% | 83,603 | -1% |
| West Virginia | 60,076 | 59,638 | -1% | 57,093 | -5% |
| Wisconsin | 106,997 | 106,561 | 0% | 107,287 | 0% |
| Wyoming | 11,527 | 11,527 | 0% | 11,527 | 0% |

## *Option 5: Requiring Communities to Absorb the Costs of Serving the Special Needs of a Certain Percent of Their Poor Children*

**Rationale.** The rationale for this option is that the education of all children, including disadvantaged children, is primarily a state and local responsibility, and communities should be able to meet the special needs of small concentrations of poor children through state and local funds. An "absorption" formula would allocate Chapter 1 funds based only on numbers of children in excess of a specified poverty threshold, replacing the current dual formula of Basic and Concentration Grants with a simpler and, depending on the absorption rate, more strongly targeted formula. The poorest counties would receive more funds because they would have a greater share of the children remaining eligible under the formula. Three absorption rates are examined here: 2, 4, and 6 percent.

**County-level Impact.** Shifting to an absorption formula could substantially increase the share of Chapter 1 funds allocated to the counties in the highest poverty quartile (see exhibit 22). Although a 2 percent absorption rate would have a minimal effect on targeting, a 6 percent absorption rate could achieve a goal of directing half of all Chapter 1 funds to the highest poverty quartile; in the 10 poorest counties, Chapter 1 funding per eligible student would rise from an average of $661 to $968 (see Appendix A). The counties with the 10 largest school districts would also benefit from shifting to 4 percent and 6 percent absorption formulas (see Exhibit 23).

One potential concern with an absorption formula is that it would take away all Chapter 1 funding from counties below the poverty threshold; a 6 percent absorption rate would

**Exhibit 22**
**Absorption Formulas**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | 43% | 26% | 20% | 11% | 20% |
| Absorption formula with: | | | | | |
| 2% threshold | 44% | 26% | 20% | 10% | 19% |
| 4% threshold | 47% | 26% | 19% | 8% | 20% |
| 6% threshold | 50% | 27% | 18% | 5% | 21% |

Exhibit reads: Replacing Basic and Concentration Grants with an absorption formula that counts only those children above a 6 percent poverty threshold would target 50 percent of the funds to the poorest counties.

**Exhibit 23**
**Absorption Formulas**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula | 2% Absorption | | 4% Absorption | | 6% Absorption | |
|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $379,982 | 3% | $407,601 | 11% | $441,867 | 20% |
| Los Angeles (CA) | 242,248 | 242,754 | 0% | 251,273 | 4% | 261,059 | 8% |
| Cook (IL) | 170,332 | 170,903 | 0% | 177,172 | 4% | 184,420 | 8% |
| Dade (FL) | 60,380 | 60,839 | 1% | 63,393 | 5% | 66,402 | 10% |
| Philadelphia (PA) | 75,952 | 78,059 | 3% | 83,246 | 10% | 89,641 | 18% |
| Harris (TX) | 76,051 | 75,423 | -1% | 77,083 | 1% | 78,813 | 4% |
| Wayne (MI) | 104,853 | 107,486 | 3% | 114,291 | 9% | 122,649 | 17% |
| Broward (FL) | 19,181 | 18,857 | -2% | 18,195 | -5% | 17,200 | -10% |
| Fairfax (VA) | 3,311 | 1,883 | -43% | 0 | -100% | 0 | -100% |
| Dallas (TX) | 41,006 | 40,159 | -2% | 40,397 | -1% | 40,460 | -1% |

eliminate the 103 least-poor counties (which contain 1 percent of current formula-eligible children). Some of these low-poverty counties may contain high-poverty districts and schools; for example, Wellston School District in St. Louis County, Missouri, had a 1980





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poverty rate of 50 percent, although the county poverty rate was only 6 percent. One way to address this problem might be to include a set-aside for special allocations to high-poverty districts in low-poverty counties.

**State-level Impact.** Absorption formulas would shift money to southern states because they have, in general, the highest child poverty rates. With the notable exception of New York, states in the Northeast and Midwest would usually lose funds. At high absorption rates, these shifts could be substantial (see Exhibits 24 and 25). At an absorption rate of 6 percent, nine states would receive funding increases of 10 percent to 20 percent (Alabama, Arkansas, District of Columbia, Kentucky, Louisiana, Mississippi, New Mexico, Texas, and West Virginia); 14 states would have losses of at least 10 percent, with the largest losses (20 percent to 31 percent) occurring in Connecticut, Maryland, New Jersey, and Utah. Lower absorption rates would produce more moderate patterns of state gains and losses; at an absorption rate of 4 percent, the same 9 states would receive increases ranging from 5 percent to 11 percent, while the maximum loss for any state would be 16 percent (Connecticut).

## *Option 6: Replacing the Basic and Concentration Grant Formulas With a Weighted-pupil Formula that Targets a Greater Proportion of Funding to Areas With High Poverty Rates*

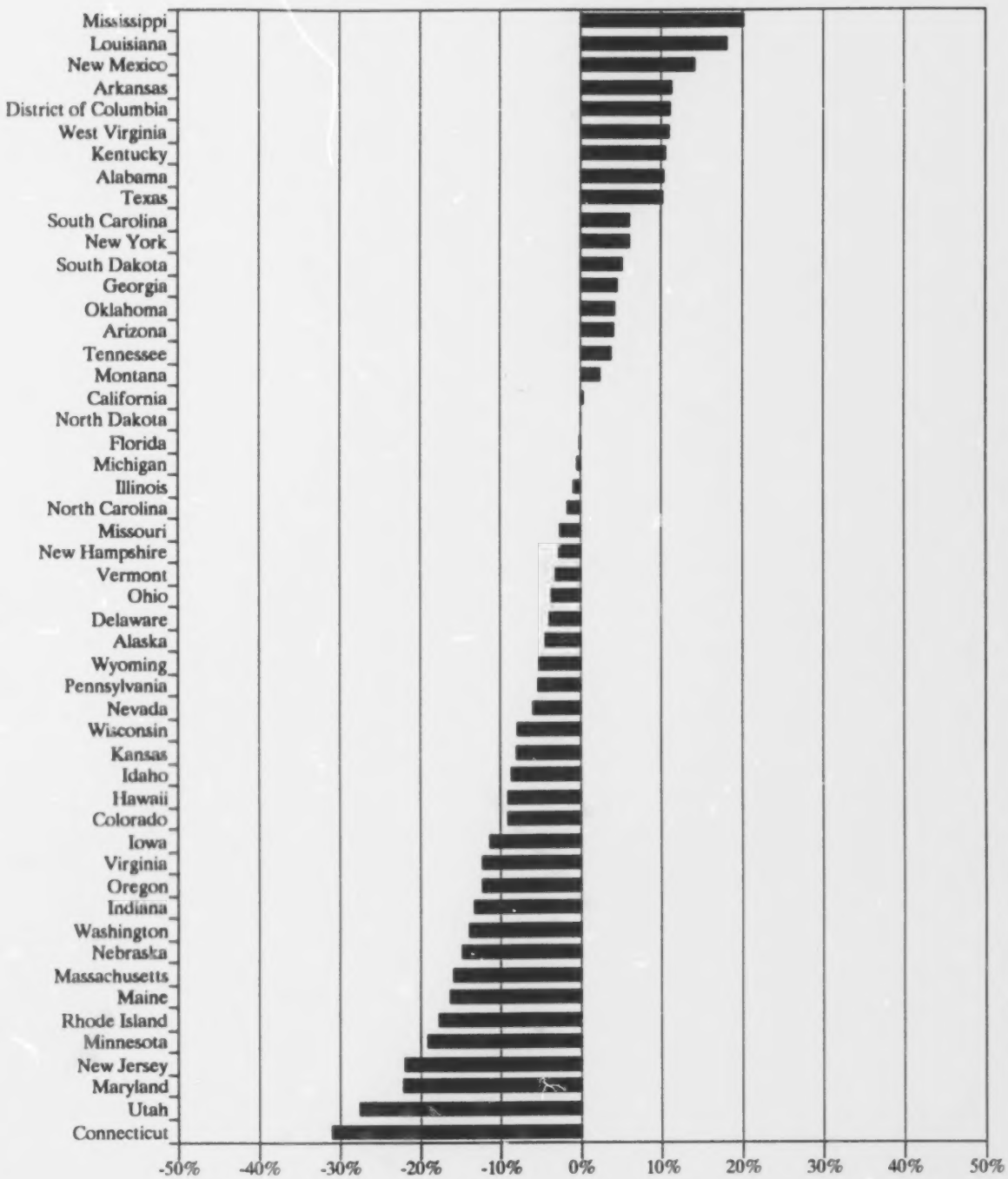
**Rationale.** The weighted-pupil formula is a variation on the absorption approach that would have severe consequences for low-poverty counties. Instead of requiring communities with low-poverty rates to absorb all costs of serving a certain percentage of

## Exhibit 24
## Absorption Formulas
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | 2% Absorption | | 4% Absorption | | 6% Absorption | |
|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $116,454 | 2% | $121,116 | 6% | $126,574 | 10% |
| Alaska | 11,364 | 10,866 | -4% | 10,866 | -4% | 10,866 | -4% |
| Arizona | 91,258 | 90,632 | -1% | 92,757 | 2% | 95,011 | 4% |
| Arkansas | 68,379 | 69,645 | 2% | 72,590 | 6% | 76,058 | 11% |
| California | 664,724 | 658,338 | -1% | 663,816 | 0% | 666,963 | 0% |
| Colorado | 62,334 | 62,357 | 0% | 59,952 | -4% | 56,670 | -9% |
| Connecticut | 47,114 | 45,125 | -4% | 39,366 | -16% | 32,501 | -31% |
| Delaware | 12,128 | 11,653 | -4% | 11,653 | -4% | 11,653 | -4% |
| District of Columbia | 18,083 | 18,270 | 1% | 19,097 | 6% | 20,080 | 11% |
| Florida | 269,056 | 269,037 | 0% | 269,572 | 0% | 268,587 | 0% |
| Georgia | 156,652 | 157,749 | 1% | 160,184 | 2% | 163,792 | 5% |
| Hawaii | 16,689 | 15,681 | -6% | 15,180 | -9% | 15,180 | -9% |
| Idaho | 19,851 | 19,859 | 0% | 19,178 | -3% | 18,148 | -9% |
| Illinois | 283,664 | 282,028 | -1% | 281,252 | -1% | 281,232 | -1% |
| Indiana | 96,244 | 95,801 | 0% | 90,336 | -6% | 83,443 | -13% |
| Iowa | 45,180 | 46,233 | 2% | 43,697 | -3% | 40,040 | -11% |
| Kansas | 45,272 | 45,341 | 0% | 43,284 | -4% | 41,654 | -8% |
| Kentucky | 106,263 | 107,972 | 2% | 112,269 | 6% | 117,306 | 10% |
| Louisiana | 173,254 | 178,066 | 3% | 189,904 | 10% | 204,501 | 18% |
| Maine | 22,174 | 21,993 | -1% | 20,574 | -7% | 18,563 | -16% |
| Maryland | 77,405 | 74,577 | -4% | 67,102 | -13% | 60,341 | -22% |
| Massachusetts | 109,157 | 107,234 | -2% | 100,665 | -8% | 91,783 | -16% |
| Michigan | 266,081 | 266,268 | 0% | 266,137 | 0% | 264,782 | 0% |
| Minnesota | 74,623 | 72,864 | -2% | 67,200 | -10% | 60,347 | -19% |
| Mississippi | 114,058 | 118,095 | 4% | 126,574 | 11% | 137,089 | 20% |
| Missouri | 108,002 | 107,820 | 0% | 106,910 | -1% | 105,175 | -3% |
| Montana | 23,514 | 23,575 | 0% | 23,848 | 1% | 24,073 | 2% |
| Nebraska | 27,211 | 26,921 | -1% | 25,337 | -7% | 23,160 | -15% |
| Nevada | 16,133 | 15,870 | -2% | 15,180 | -6% | 15,180 | -6% |
| New Hampshire | 12,838 | 12,498 | -3% | 12,498 | -3% | 12,498 | -3% |
| New Jersey | 126,570 | 120,588 | -5% | 109,381 | -14% | 98,726 | -22% |
| New Mexico | 54,082 | 55,041 | 2% | 58,021 | 7% | 61,699 | 14% |
| New York | 556,321 | 562,915 | 1% | 574,223 | 3% | 589,633 | 6% |
| North Carolina | 118,303 | 120,979 | 2% | 119,323 | 1% | 116,372 | -2% |
| North Dakota | 15,180 | 15,180 | 0% | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 253,055 | -1% | 250,735 | -2% | 246,079 | -4% |
| Oklahoma | 76,415 | 76,568 | 0% | 78,080 | 2% | 79,608 | 4% |
| Oregon | 58,099 | 57,414 | -1% | 54,808 | -6% | 50,994 | -12% |
| Pennsylvania | 275,687 | 275,092 | 0% | 268,008 | -3% | 261,193 | -5% |
| Rhode Island | 19,022 | 18,228 | -4% | 17,123 | -10% | 15,653 | -18% |
| South Carolina | 84,348 | 85,611 | 1% | 87,501 | 4% | 89,483 | 6% |
| South Dakota | 17,038 | 17,393 | 2% | 17,660 | 4% | 17,906 | 5% |
| Tennessee | 110,730 | 110,427 | 0% | 112,610 | 2% | 114,847 | 4% |
| Texas | 532,606 | 539,824 | 1% | 561,365 | 5% | 586,604 | 10% |
| Utah | 29,338 | 28,620 | -2% | 25,527 | -13% | 21,248 | -28% |
| Vermont | 10,942 | 10,602 | -3% | 10,602 | -3% | 10,602 | -3% |
| Virginia | 92,885 | 90,063 | -3% | 84,510 | -9% | 81,551 | -12% |
| Washington | 84,666 | 83,552 | -1% | 79,205 | -6% | 72,902 | -14% |
| West Virginia | 60,076 | 60,854 | 1% | 63,483 | 6% | 66,597 | 11% |
| Wisconsin | 106,997 | 107,863 | 1% | 103,251 | -4% | 98,563 | -8% |
| Wyoming | 11,527 | 10,931 | -5% | 10,931 | -5% | 10,931 | -5% |

## Exhibit 25

## Effects of Absorption Formula with 6 Percent Threshold




**Percentage Change in FY 1993 Allocations**

Exhibit reads: Using an absorption formula with a 6 percent threshold would increase funding to Mississippi by 20 percent while reducing Connecticut's funding by 31 percent.

their poor children, this approach would require them to shoulder a greater share of the cost for these students, thus shifting part of available funds to the neediest communities. Here we examine the effects of weighting students below the threshold by one-half and fully counting students above the threshold, with thresholds of 6, 10, 16, and 18 percent.

**County-level Impact.** Weighted-pupil formulas could achieve targeting gains similar to those of absorption formulas but without the cost of entirely eliminating some counties from the formula. The maximum loss to any county under a weighted-pupil threshold of 18 percent would be 21 percent. The goal of targeting half of the funds to the highest poverty quartile could be approximated with thresholds of 16 to 18 percent, although this would come partly at the expense of counties in the second-highest quartile (see exhibit 26). A 10 percent threshold would come close to achieving the same improvement in targeting to the highest quartile (giving them 48 percent of the funds) but without taking funds away from the second poorest group. The relatively low threshold of 6 percent also produces a noticeable gain for the poorest quartile (from 43 percent of the funds to 46 percent).

For the 10 poorest counties, an 18 percent weighted-pupil formula would result in an average increase from $661 per poor school-age child to $1081 (see Appendix A). Examining the effects on the counties with the largest school districts would be mixed. Although the average per-pupil funding would rise from $821 to $1,363 (see Appendix B), half of these counties would actually receive less money (see exhibit 27).

## Exhibit 26
## Weighted Pupil Formulas
## Effects on the Distribution of FY 1993 Funds Across Counties

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Poor children ages 5-17 | 45% | 26% | 19% | 10% | 16% |
| Current formula | 43% | 26% | 20% | 11% | 20% |
| Weighted-pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | 46% | 26% | 20% | 9% | 20% |
| 10% threshold/½ pupil weight | 48% | 26% | 18% | 8% | 20% |
| 16% threshold/½ pupil weight | 49% | 24% | 17% | 10% | 21% |
| 18% threshold/½ pupil weight | 49% | 23% | 17% | 10% | 20% |

Exhibit reads: Replacing Basic and Concentration Grants with a weighted-pupil formula that weights poor children below a 16 percent poverty threshold by one-half would target 49 percent of the funds to the poorest counties.

## Exhibit 27
## Weighted Pupil Formulas
## Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts
## (Allocations in thousands of dollars)

| Counties | Current Formula | 6% Threshold ½ Weight | | 10% Threshold ½ Weight | | 16% Threshold ½ Weight | | 18% Threshold ½ Weight | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| New York City (NY) | $367,848 | $391,806 | 7% | $414,738 | 13% | $438,051 | 19% | $440,033 | 20% |
| Los Angeles (CA) | 242,248 | 246,067 | 2% | 250,540 | 3% | 245,786 | 1% | 239,255 | -1% |
| Cook (IL) | 170,332 | 173,361 | 2% | 176,813 | 4% | 174,048 | 2% | 169,671 | 0% |
| Dade (FL) | 60,380 | 61,864 | 2% | 63,452 | 5% | 63,163 | 5% | 61,868 | 2% |
| Philadelphia (PA) | 75,952 | 80,262 | 6% | 84,431 | 11% | 88,172 | 16% | 88,070 | 16% |
| Harris (TX) | 76,051 | 75,994 | 0% | 76,282 | 0% | 72,678 | -4% | 69,843 | -8% |
| Wayne (MI) | 104,853 | 110,363 | 5% | 115,727 | 10% | 120,153 | 15% | 119,737 | 14% |
| Broward (FL) | 19,181 | 18,499 | -4% | 17,370 | -9% | 15,568 | -19% | 16,261 | -15% |
| Fairfax (VA) | 3,311 | 2,241 | -32% | 2,539 | -23% | 3,000 | -9% | 3,133 | -5% |
| Dallas (TX) | 41,006 | 40,163 | -2% | 39,595 | -3% | 36,285 | -12% | 34,247 | -16% |

**State-level Impact.** Weighted-pupil formulas would have similar effects on state allocations as absorption formulas, except that magnitudes of change would be less (see exhibits 28 and 29). A weighted-pupil formula with an 18 percent threshold would

## Exhibit 28
## Weighted Pupil Formulas
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | 6% Threshold ½ Weight | | 10% Threshold ½ Weight | | 16% Threshold ½ Weight | | 18% Threshold ½ Weight | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $118,311 | 3% | $121,097 | 6% | $121,151 | 6% | $119,583 | 4% |
| Alaska | 11,364 | 10,866 | -4% | 10,866 | -4% | 10,866 | -4% | 10,866 | -4% |
| Arizona | 91,258 | 91,379 | 0% | 91,871 | 1% | 87,859 | -4% | 88,542 | -3% |
| Arkansas | 68,379 | 70,829 | 4% | 72,665 | 6% | 73,568 | 8% | 73,177 | 7% |
| California | 664,724 | 659,131 | -1% | 653,456 | -2% | 640,625 | -4% | 636,082 | -4% |
| Colorado | 62,334 | 61,198 | -2% | 60,184 | -3% | 61,377 | -2% | 61,807 | -1% |
| Connecticut | 47,114 | 42,752 | -9% | 37,754 | -20% | 39,855 | -15% | 41,630 | -12% |
| Delaware | 12,128 | 11,653 | -4% | 11,653 | -4% | 11,653 | -4% | 11,653 | -4% |
| District of Columbia | 18,083 | 18,605 | 3% | 19,150 | 6% | 19,193 | 6% | 18,854 | 4% |
| Florida | 269,056 | 268,569 | 0% | 264,048 | -2% | 251,602 | -6% | 250,211 | -7% |
| Georgia | 156,652 | 159,082 | 2% | 162,242 | 4% | 164,381 | 5% | 164,527 | 5% |
| Hawaii | 16,689 | 15,180 | -9% | 15,180 | -9% | 15,180 | -9% | 15,180 | -9% |
| Idaho | 19,851 | 19,493 | -2% | 18,385 | -7% | 17,418 | -12% | 17,677 | -11% |
| Illinois | 283,664 | 282,782 | 0% | 283,006 | 0% | 279,419 | -1% | 275,893 | -3% |
| Indiana | 96,244 | 93,401 | -3% | 88,606 | -8% | 86,011 | -11% | 86,134 | -11% |
| Iowa | 45,180 | 44,928 | -1% | 41,597 | -8% | 40,702 | -10% | 41,355 | -8% |
| Kansas | 45,272 | 44,811 | -1% | 43,177 | -5% | 41,415 | -9% | 42,058 | -7% |
| Kentucky | 106,263 | 109,683 | 3% | 112,448 | 6% | 113,118 | 6% | 112,242 | 6% |
| Louisiana | 173,254 | 183,094 | 6% | 192,609 | 11% | 201,159 | 16% | 201,060 | 16% |
| Maine | 22,174 | 21,276 | -4% | 19,648 | -11% | 19,249 | -13% | 19,724 | -11% |
| Maryland | 77,405 | 72,436 | -6% | 75,731 | -2% | 82,701 | 7% | 84,470 | 9% |
| Massachusetts | 109,157 | 104,097 | -5% | 99,524 | -9% | 101,822 | -7% | 103,825 | -5% |
| Michigan | 266,081 | 265,695 | 0% | 266,170 | 0% | 269,044 | 1% | 269,077 | 1% |
| Minnesota | 74,623 | 70,480 | -6% | 66,926 | -10% | 65,413 | -12% | 66,881 | -10% |
| Mississippi | 114,058 | 121,723 | 7% | 128,729 | 13% | 136,276 | 19% | 137,040 | 20% |
| Missouri | 108,002 | 107,167 | -1% | 107,574 | 0% | 108,891 | 1% | 108,908 | 1% |
| Montana | 23,514 | 23,641 | 1% | 23,486 | 0% | 22,214 | -6% | 22,061 | -6% |
| Nebraska | 27,211 | 26,155 | -4% | 24,537 | -10% | 23,771 | -13% | 24,493 | -10% |
| Nevada | 16,133 | 15,281 | -5% | 15,180 | -6% | 15,180 | -6% | 15,180 | -6% |
| New Hamphire | 12,838 | 12,498 | -3% | 12,498 | -3% | 12,498 | -3% | 12,498 | -3% |
| New Jersey | 126,570 | 117,632 | -7% | 116,696 | -8% | 117,014 | -8% | 118,103 | -7% |
| New Mexico | 54,082 | 56,307 | 4% | 58,549 | 8% | 59,847 | 11% | 59,445 | 10% |
| New York | 556,321 | 568,237 | 2% | 581,415 | 5% | 599,173 | 8% | 604,355 | 9% |
| North Carolina | 118,303 | 119,890 | 1% | 116,224 | -2% | 114,614 | -3% | 115,359 | -2% |
| North Dakota | 15,180 | 15,180 | 0% | 15,180 | 0% | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 251,303 | -2% | 246,267 | -4% | 234,980 | -8% | 232,113 | -9% |
| Oklahoma | 76,415 | 77,067 | 1% | 77,320 | 1% | 75,511 | -1% | 74,321 | -3% |
| Oregon | 58,099 | 56,051 | -4% | 53,786 | -7% | 50,233 | -14% | 51,284 | -12% |
| Pennsylvania | 275,687 | 272,791 | -1% | 268,322 | -3% | 265,793 | -4% | 267,530 | -3% |
| Rhode Island | 19,022 | 17,710 | -7% | 17,454 | -8% | 16,511 | -13% | 16,022 | -16% |
| South Carolina | 84,348 | 86,263 | 2% | 86,600 | 3% | 85,938 | 2% | 85,704 | 2% |
| South Dakota | 17,038 | 17,472 | 3% | 17,570 | 3% | 17,961 | 5% | 18,161 | 7% |
| Tennessee | 110,730 | 111,154 | 0% | 111,557 | 1% | 108,371 | -2% | 106,001 | -4% |
| Texas | 532,606 | 548,403 | 3% | 562,987 | 6% | 569,384 | 7% | 564,517 | 6% |
| Utah | 29,338 | 27,107 | -8% | 23,932 | -18% | 25,715 | -12% | 26,598 | -9% |
| Vermont | 10,942 | 10,602 | -3% | 10,602 | -3% | 10,602 | -3% | 10,602 | -3% |
| Virginia | 92,885 | 89,645 | -3% | 90,487 | -3% | 92,545 | 0% | 92,984 | 0% |
| Washington | 84,666 | 81,309 | -4% | 76,416 | -10% | 76,299 | -10% | 77,781 | -8% |
| West Virginia | 60,076 | 61,914 | 3% | 63,610 | 6% | 63,973 | 6% | 63,395 | 6% |
| Wisconsin | 106,997 | 106,458 | -1% | 103,722 | -3% | 105,432 | -1% | 106,549 | 0% |
| Wyoming | 11,527 | 10,931 | -5% | 10,931 | -5% | 10,931 | -5% | 10,931 | -5% |

## Exhibit 29

### Effects of Weighted-Pupil Formula with 18 Percent Threshold and 1/2 Pupil Weight

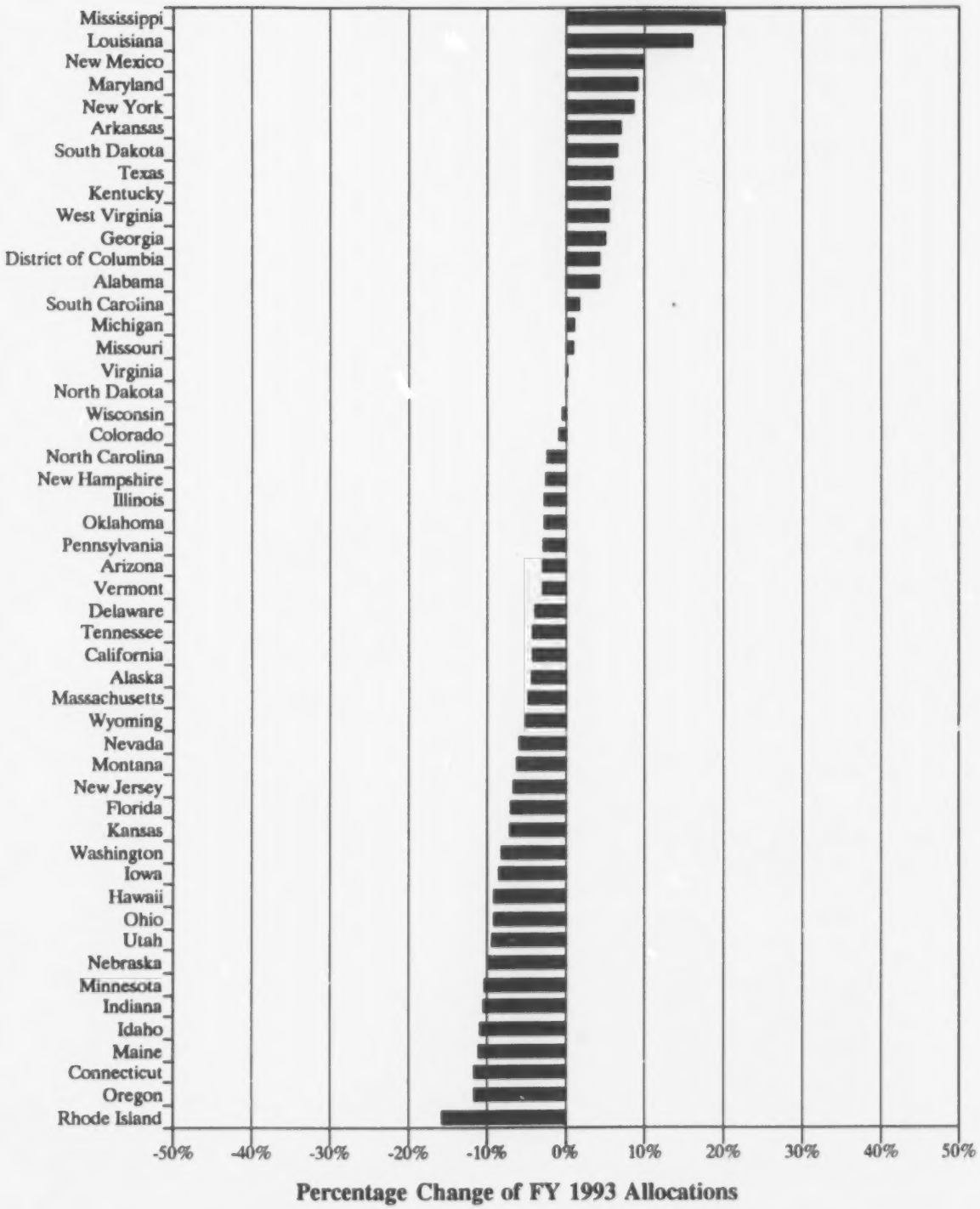



Exhibit reads: Using a weighted-pupil formula that weights poor children below an 18 percent poverty threshold by one-half would increase funding to Mississippi by 20 percent while reducing Rhode Island's funding by 16 percent.

produce roughly the same increase in targeting as an absorption formula with a 6 percent threshold, but the weighted formula would cause maximum losses of 10 to 16 percent in 8 states, whereas the absorption formula would cause maximum losses of 10 to 31 percent in 14 states. States in the Sun Belt would gain, while most northeastern and midwestern states would lose funding. New York and the District of Columbia also would gain.

## *School Targeting Options*

Current school eligibility provisions for participation in the Chapter 1 program generally allow districts to serve only schools with a poverty rate above the average rate for the district. However, exceptions to this rule allow districts to serve all schools when the variance in school poverty rates is within 5 percent of the district average, to serve all schools that have more than 25 percent poor children, to limit services to certain grade levels, or to serve ineligible schools if they were eligible in the previous year. Although school eligibility is based on poverty, the amount of funds each school receives is based on its number of low-achieving students, a provision that may penalize successful schools while rewarding those that fail to raise student achievement.

Current school targeting provisions result in 60 percent of all public schools and 71 percent of public elementary schools participating in the Chapter 1 program. Schools at all poverty levels participate (including 45 percent of the elementary schools with fewer than 10 percent of their students receiving free or reduced price lunches), yet some high-poverty schools receive no Chapter 1 support. High-poverty schools go unserved because some high-poverty districts concentrate their funds on their neediest schools and

because some districts focus on the early grades and do not serve high schools or middle schools.

Changing targeting at the school level may require greater reliance on data from the free and reduced-price school lunch program, which are frequently the only data on low-income children that are available at the school level. These data differ significantly from census poverty data in two ways:

1. The school lunch program uses a looser definition of poverty (130 percent of the poverty line for free school lunch eligibility and 185 percent of poverty for reduced-price school lunches), so using this measure could weaken targeting on the poorest students.

2. The distribution of students eligible for school lunches differs substantially from the distribution of poor children counted in the census for the same year, apparently because of differences in the percentage of eligible children who sign up for the program (see Section 4). Using this measure could cause large funding shifts that are inconsistent with more complete poverty data.

Three options to achieve better school-level targeting are as follows:

1. Requiring districts to allocate funds to schools solely on the basis of poverty,

2. Replacing the current multistage targeting process with direct state allocations to schools using data on subsidized school lunches, and

3. Serving only those schools above the state or national poverty average.

## *Option 1: Requiring Districts to Allocate Funds to Schools Solely On the Basis of Poverty*

**Rationale.** Currently, once a school is selected to participate in Chapter 1, the amount of money it receives is based not on its number of poor children but on the relative educational deprivation of its students (typically, the number of children scoring below the district's cutoff point on standardized tests). Critics of the low-achievement criterion for school allocations contend that this mechanism establishes a perverse incentive: as achievement rises, funding decreases. Indeed, 13 percent of principals in elementary schools reported that their Chapter 1 program had lost some funding as a result of improved performance (Millsap & Moss, 1992). Whether or not school staff make conscious choices based on this incentive, a low-achievement criterion effectively penalizes successful schools while rewarding unsuccessful ones.

Using poverty instead of low achievement as the basis for Chapter 1 allocations to schools would eliminate this perverse incentive. However, one could argue that schools with declining numbers of low-achieving students have a declining need for Chapter 1 support and that the limited amount of federal funds should be targeted to those schools that continue to have the greatest educational needs.

**Impact.** Although available data do not permit assessment of the impact of this option nationally, a preliminary examination of the option's effects on the targeting of Chapter 1 grants has been conducted using data for five large urban school districts (Westat Inc., 1992c). This analysis compared current Chapter 1 school allocations with hypothetical

allocations made in direct proportion to each school's number of low-income students. In three districts, schools that gained additional funding enrolled more than half of the poor students in Chapter 1 schools, suggesting that the measure would shift funds to higher-poverty schools. However, in the other two districts, schools losing funds enrolled more than half of the poor students; in these districts, current allocation methods based on low achievement appear to target more funds to higher-poverty schools than would a poverty-based measure. This situation could occur if a district provided a higher level of Chapter 1 funding per pupil to schools whose students have more severe educational disadvantage.

The analysis of selected large urban districts (Westat Inc., 1992c) also found that several districts had a negative correlation between school poverty and low achievement, a surprising finding in view of the substantial body of research showing a strong positive relationship between school poverty and low student achievement. One possible explanation could be problems with the accuracy of school-level poverty data (usually free and reduced-price lunch data). For example, systematic bias in subsidized lunch counts may be produced by cultural differences among school populations which lead to differences in the percent of low-income students who sign up for the subsidized lunch program (problems with subsidized lunch data are discussed further in Section 4).

Therefore, allowing school districts the option of using either poverty or low achievement as the basis for school allocations may be preferable to a mandatory approach. Allowing

this choice would also provide the opportunity to evaluate the effects of substituting poverty for low achievement as the basis for school allocations.

## *Option 2: Replacing the Current Data on Multistage Targeting Process With Direct State Allocations to Schools Using Data from the Subsidized School Lunch Program*

**Rationale.** Critics of Chapter 1 school targeting provisions argue that the current law allows districts to spread funds thinly and serve many schools with relatively low poverty rates instead of concentrating funds on the schools with the greatest needs. Under this option, schools would be eligible only if their poverty rate exceeded the state or national average, and states would allocate funds directly to eligible schools in proportion to each school's number of poor children. The federal government would allocate funds to states using census poverty data, but county-level allocations would be unnecessary; this option might allow the use of more current poverty data, which would be easier to obtain annually at the state level. States would use the best available data on child poverty at the school level — probably, counts of students eligible for subsidized school lunches. In addition to directing more funds to the higher-poverty schools and permitting use of more current poverty data, this option would eliminate the disincentive effect of basing school allocations on low achievement.

**Impact.** Serving only schools with poverty rates above the state or national poverty average would increase the number of eligible schools in high-poverty districts and reduce the number of schools eligible in low-poverty districts. Based on data from the Schools

and Staffing Survey (NCES, 1988), 18,000 Chapter 1 schools (39 percent of the schools currently participating) would become ineligible if the state or national average for participation in the free or reduced-price lunch program were used as the sole criterion for school eligibility (see exhibit 30). However, 32 percent of schools currently not served by Chapter 1 would be considered eligible. The total number of schools served would decline from 46,000 (60 percent of all schools) to 37,600 (49 percent of schools).

**Exhibit 30**
**Effects of Serving Only Schools with Poverty Rates Above the State or National Average**

| School Poverty Rate (Based on Free and Reduced Price Lunch Participation) | Chapter 1 Schools | Number of Chapter 1 Schools That Would Become Ineligible | Percent of Total Chapter 1 Schools That Would Become Ineligible |
|---|---|---|---|
| High (Over 50%) | 12,256 | 0 | 0% |
| Medium (20% to 50%) | 19,103 | 3,256 | 17.0% |
| Low (Less than 20%) | 15,025 | 14,766 | 98.3% |
| Total | 46,384 | 18,022 | 38.9% |

Exhibit reads: Serving only schools where the free and reduced-price lunch participation rate is above the state average would make 39 percent of current Chapter 1 schools ineligible and redirect their Chapter 1 funds to schools with higher poverty rates.

Source: Westat, Inc. (1993), unpublished tabulations from the NCES Schools and Staffing Survey, 1987-88.

In some states, this option could have a dramatic impact on targeting. One analysis indicates that in two out of three states examined, using the statewide poverty average would eliminate funding to two-thirds of the state's districts (Breslin, 1993). These findings suggest that, at least in some states, high-poverty schools are concentrated in a relatively small number of districts.

### *Option 3: Serving Only Those Schools Above the State or National Poverty Average*

**Rationale.** This option has the same goal as Option 2: concentrating Chapter 1 funds on the poorest schools in each state. However, Option 3 proposes less dramatic changes in the funding process, changing the school eligibility rules but retaining current provisions for allocating funds to counties and school districts.

**Impact.** As under Option 2, 18,000 Chapter 1 schools would become ineligible. Some districts that receive Chapter 1 funds would have no eligible schools; in some states, the number of Chapter 1-funded districts with no eligible schools could be as high as two-thirds of the state's districts (Breslin, 1993). Provisions would need to be made for these cases, either recapturing and redistributing the funds to other school districts in the state or else allowing these districts to serve their highest-poverty schools. Recapturing funds could be politically difficult; however, allowing the funds to remain in districts with no eligible school would dilute this option's ability to concentrate funds on the poorest schools. In short, restricting school eligibility to those schools above the state or national poverty average would make it very awkward, at best, to retain the current process for allocating funds to school districts.

## *Conclusion*

Many options are available to improve significantly the targeting of Chapter 1 funds. Targeting could be strengthened within the framework of the existing formula by raising

the share of funds allocated through Concentration Grants and changing the Concentration Grant eligibility thresholds. Increased targeting and simplification of the formula could be achieved by replacing the current Basic and Concentration Grant formulas with a single absorption or weighted-pupil formula. At the school level, the current problem — that some high-poverty schools go unserved while low-poverty schools receive funds — could be addressed by replacing the current multistage targeting process with direct state allocations to schools or by restricting eligibility to schools above the state or national poverty average. The perverse incentive caused by basing school allocations on low achievement could be addressed by allocating funds strictly on the basis of poverty, although some flexibility may be preferable to allow consideration of the unique circumstances in each school district.

# IV

# *Improving the Timeliness of Poverty Data*

Decennial census counts of poor school-age children (ages 5-17) are the predominant factor in Chapter 1 allocations to states and counties. This section examines the impact of the use of census poverty data and explores several potential solutions to the inappropriate funding allocations that result from reliance on the decennial census.[3]

## *Section Summary*

The definition and source of poverty data play a crucial role in the formulas for allocating Chapter 1 aid. Over the years critics of the use of the decennial census have proposed data sources or adjustments to the decennial census data. These solutions include attempts to maintain the current definition and "update" the data as well as alternatives employing different poverty definitions and data sources.

All the proposed solutions have limitations. The most promising — having the Census Bureau produce county-level estimates every two years — is in the research and development stage. Updating the data using annual percentage changes in state enrollments would take into account gross geographical shifts in the school-age

[3]This section does not examine data from the AFDC program as an alternative poverty indicator for Chapter 1. AFDC eligibility requirements differ from state to state, so using this measure would systematically bias allocations in favor of states with more liberal AFDC eligibility rules. However, in some states AFDC data may provide a good poverty measure for suballocating funds to districts and schools within the state.

population among states but would not adjust for shifts within states. Using counts of students in the free and reduced-price school lunch program could provide district-level child poverty data that are updated annually, but because the distribution of poor children by this measure differs substantially from census poverty counts for the same year, using these counts would weaken and skew targeting. Despite the drawbacks of using census counts, they at least represent a uniform, objective measure of poverty.

Exhibits 31 and 32 summarize the effects on states and large urban counties of using annually adjusted census data and using data on free school lunches. Each option is discussed in this section.

## *The Need for Accurate Data on Child Poverty*

Decennial census counts of poor school-age children (ages 5-17) are the predominant factor in Chapter 1 allocations to states and counties. Because geographic shifts in the distribution of child poverty that occur over the course of the decade are not reflected in Chapter 1 allocations until the next census is completed, areas that experience increases in their population of poor children do not receive Chapter 1 funds for these new children until the next census, while areas with a declining poverty population continue to receive funds for children who are no longer there. Moreover, because of lags in completing tabulations of the decennial census, school district allocations will not reflect the 1990 census data until the 1993-94 school year.

## Exhibit 31
## Options for Alternative Poverty Counts
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | 1990 Census Current Formula | 1980 Census | | Adjusted 1980 Census | | Free Lunch Eligibles | |
|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $134,786 | 17% | $110,512 | -4% | $119,472 | 4% |
| Alaska | 11,364 | 10,952 | -4% | 14,425 | 27% | 11,478 | 1% |
| Arizona | 91,258 | 63,131 | -31% | 111,853 | 23% | 82,128 | -10% |
| Arkansas | 68,379 | 74,859 | 9% | 69,464 | 2% | 63,175 | -8% |
| California | 664,724 | 527,048 | -21% | 793,045 | 19% | 756,812 | 14% |
| Colorado | 62,334 | 49,719 | -20% | 68,832 | 10% | 58,546 | -6% |
| Connecticut | 47,114 | 64,262 | 36% | 38,617 | -18% | 46,259 | -2% |
| Delaware | 12,128 | 16,756 | 38% | 12,128 | 0% | 12,637 | 4% |
| District of Columbia | 18,083 | 28,670 | 59% | 15,785 | -13% | 21,930 | 21% |
| Florida | 269,056 | 271,058 | 1% | 307,247 | 14% | 332,398 | 24% |
| Georgia | 156,652 | 179,003 | 14% | 165,543 | 6% | 185,981 | 19% |
| Hawaii | 16,689 | 18,947 | 14% | 16,625 | 0% | 21,986 | 32% |
| Idaho | 19,851 | 18,111 | -9% | 23,253 | 17% | 18,793 | -5% |
| Illinois | 283,664 | 299,053 | 5% | 244,912 | -14% | 285,327 | 1% |
| Indiana | 96,244 | 95,786 | 0% | 88,665 | -8% | 84,413 | -12% |
| Iowa | 45,180 | 46,223 | 2% | 41,263 | -9% | 44,124 | -2% |
| Kansas | 45,272 | 38,478 | -15% | 48,218 | 7% | 45,689 | 1% |
| Kentucky | 106,263 | 115,017 | 8% | 97,398 | -8% | 97,302 | -8% |
| Louisiana | 173,254 | 149,308 | -14% | 162,154 | -6% | 169,531 | -2% |
| Maine | 22,174 | 30,921 | 39% | 22,659 | 2% | 20,064 | -10% |
| Maryland | 77,405 | 101,982 | 32% | 61,500 | -21% | 85,734 | 11% |
| Massachusetts | 109,157 | 142,874 | 31% | 89,072 | -18% | 92,025 | -16% |
| Michigan | 266,081 | 241,477 | -9% | 234,348 | -12% | 200,689 | -25% |
| Minnesota | 74,623 | 66,879 | -10% | 73,591 | -1% | 72,004 | -4% |
| Mississippi | 114,058 | 121,614 | 7% | 110,206 | -3% | 118,668 | 4% |
| Missouri | 108,002 | 103,370 | -4% | 100,255 | -7% | 104,910 | -3% |
| Montana | 23,514 | 17,344 | -26% | 24,662 | 5% | 17,475 | -26% |
| Nebraska | 27,211 | 27,996 | 3% | 26,270 | -3% | 26,388 | -3% |
| Nevada | 16,133 | 14,731 | -9% | 22,157 | 37% | 14,731 | -9% |
| New Hampshire | 12,838 | 14,995 | 17% | 12,838 | 0% | 12,838 | 0% |
| New Jersey | 126,570 | 201,346 | 59% | 102,480 | -19% | 141,442 | 12% |
| New Mexico | 54,082 | 44,718 | -17% | 61,391 | 14% | 52,932 | -2% |
| New York | 556,321 | 673,141 | 21% | 464,187 | -17% | 606,098 | 9% |
| North Carolina | 118,303 | 153,781 | 30% | 117,802 | 0% | 132,419 | 12% |
| North Dakota | 15,180 | 15,180 | 0% | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 221,439 | -13% | 226,029 | -11% | 205,982 | -19% |
| Oklahoma | 76,415 | 59,852 | -22% | 82,692 | 8% | 72,004 | -6% |
| Oregon | 58,099 | 46,656 | -20% | 61,335 | 6% | 55,028 | -5% |
| Pennsylvania | 275,687 | 304,581 | 10% | 221,713 | -20% | 214,809 | -22% |
| Rhode Island | 19,022 | 23,577 | 24% | 15,989 | -16% | 17,450 | -8% |
| South Carolina | 84,348 | 97,189 | 15% | 85,435 | 1% | 92,048 | 9% |
| South Dakota | 17,038 | 18,895 | 11% | 17,013 | 0% | 16,231 | -5% |
| Tennessee | 110,730 | 132,506 | 20% | 108,019 | -2% | 109,474 | -1% |
| Texas | 532,606 | 397,041 | -25% | 655,030 | 23% | 530,444 | 0% |
| Utah | 29,338 | 21,411 | -27% | 43,065 | 47% | 23,854 | -19% |
| Vermont | 10,942 | 14,575 | 33% | 10,942 | 0% | 10,997 | 0% |
| Virginia | 92,885 | 118,955 | 28% | 95,439 | 3% | 91,658 | -1% |
| Washington | 84,666 | 66,147 | -22% | 96,229 | 14% | 80,390 | -5% |
| West Virginia | 60,076 | 57,445 | -4% | 54,958 | -9% | 55,993 | -7% |
| Wisconsin | 106,997 | 87,954 | -18% | 95,666 | -11% | 89,846 | -16% |
| Wyoming | 11,527 | 7,883 | -32% | 11,533 | 0% | 11,838 | 3% |



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**Exhibit 32**
**Options for Alternative Poverty Counts**
**Effects on FY 1993 Allocations for the Counties**
**Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | 1990 Census Current Formula | 1980 Census | | Adjusted 1980 Census | | Free Lunch Eligibles | |
|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change |
| New York (NY) | 367,848 | 436,721 | 19% | 307,664 | -16% | 393,828 | 7% |
| Los Angeles (CA) | 242,248 | 208,283 | -14% | 288,933 | 19% | 273,533 | 13% |
| Cook (IL) | 170,332 | 195,412 | 15% | 147,056 | -14% | 168,414 | -1% |
| Dade (FL) | 60,380 | 58,141 | -4% | 68,945 | 14% | 72,882 | 21% |
| Philadelphia (PA) | 75,952 | 98,850 | 30% | 61,269 | -19% | 58,178 | -23% |
| Harris (TX) | 76,051 | 46,466 | -39% | 93,522 | 23% | 75,274 | -1% |
| Wayne (MI) | 104,853 | 99,886 | -5% | 92,578 | -12% | 78,549 | -25% |
| Broward (FL) | 19,181 | 16,592 | -13% | 21,906 | 14% | 23,982 | 25% |
| Fairfax (VA) | 3,311 | 3,910 | 18% | 3,403 | 3% | 3,296 | 0% |
| Dallas (TX) | 41,006 | 30,685 | -25% | 50,427 | 23% | 40,587 | -1% |

The distribution of child poverty did in fact shift substantially between 1980 and 1990. Nationally the number of school-age children in poverty rose by 5 percent, from 7.7 million to 8.1 million. At the state level, however, 25 states experienced declines of up to 34 percent, while the other states had increases of up to 67 percent (see exhibit 33). Generally, the distribution of school-age poor children is shifting westward from the Northeast (see exhibit 34). The states with the largest gains in child poverty are sometimes the same as the states with the highest rates of child poverty (see exhibit 35).

If there were no formula provision to limit abrupt changes in funding, these shifts in poverty would cause major changes in the distribution of Chapter 1 funding across the states when the 1990 census is used for the first time in the FY 1993 allocations. Without, the current Chapter 1 "85 percent hold-harmless" provision to phase in funding shifts over a number of years, 24 states would receive up to 46 percent more funding

## Exhibit 33
## Change in Population of Poor Children Ages 5-17, by State
## 1990 Census Compared with 1980 Census

| State | Census Poverty Counts | | Difference | Percentage Change |
|---|---|---|---|---|
| | 1980 | 1990 | | |
| Alabama | 197,293 | 177,908 | -19,385 | -10% |
| Alaska | 10,140 | 10,887 | 747 | 7% |
| Arizona | 89,400 | 136,177 | 46,785 | 52% |
| Arkansas | 110,779 | 106,675 | -4,099 | -4% |
| California | 647,040 | 894,202 | 247,710 | 38% |
| Colorado | 62,352 | 81,787 | 19,446 | 31% |
| Connecticut | 65,286 | 50,309 | -14,951 | -23% |
| Delaware | 17,981 | 12,327 | -5,654 | -31% |
| District of Columbia | 27,862 | 18,355 | -9,497 | -34% |
| Florida | 323,890 | 343,642 | 34,396 | 11% |
| Georgia | 248,422 | 228,344 | -20,051 | -8% |
| Hawaii | 22,639 | 20,303 | -2,336 | -10% |
| Idaho | 27,951 | 32,064 | 4,113 | 15% |
| Illinois | 335,021 | 327,904 | -6,995 | -2% |
| Indiana | 129,587 | 132,403 | 2,816 | 2% |
| Iowa | 64,377 | 65,066 | 689 | 1% |
| Kansas | 49,035 | 59,370 | 10,344 | 21% |
| Kentucky | 165,634 | 160,547 | -5,087 | -3% |
| Louisiana | 220,160 | 267,035 | 46,957 | 21% |
| Maine | 36,015 | 26,703 | -9,312 | -26% |
| Maryland | 103,938 | 82,451 | -21,466 | -21% |
| Massachusetts | 140,328 | 112,193 | -28,084 | -20% |
| Michigan | 252,874 | 287,678 | 34,809 | 14% |
| Minnesota | 80,625 | 93,010 | 12,396 | 15% |
| Mississippi | 179,514 | 177,433 | -2,081 | -1% |
| Missouri | 138,627 | 150,289 | 11,662 | 8% |
| Montana | 20,906 | 29,257 | 8,351 | 40% |
| Nebraska | 36,935 | 36,560 | -375 | -1% |
| Nevada | 14,494 | 22,931 | 8,481 | 59% |
| New Hampshire | 17,130 | 12,094 | -5,036 | -29% |
| New Jersey | 202,592 | 134,093 | -67,293 | -33% |
| New Mexico | 64,375 | 82,713 | 18,374 | 29% |
| New York | 625,160 | 530,668 | -93,973 | -15% |
| North Carolina | 220,162 | 180,305 | -39,857 | -18% |
| North Dakota | 18,831 | 19,892 | 1,061 | 6% |
| Ohio | 276,913 | 321,349 | 44,437 | 16% |
| Oklahoma | 91,782 | 119,464 | 27,700 | 30% |
| Oregon | 54,816 | 67,586 | 12,777 | 23% |
| Pennsylvania | 309,115 | 283,919 | -25,086 | -8% |
| Rhode Island | 23,195 | 19,208 | -3,987 | -17% |
| South Carolina | 142,975 | 130,600 | -12,375 | -9% |
| South Dakota | 28,154 | 26,474 | -1,680 | -6% |
| Tennessee | 192,903 | 168,816 | -24,083 | -12% |
| Texas | 568,132 | 791,190 | 223,120 | 39% |
| Utah | 33,435 | 48,940 | 15,505 | 46% |
| Vermont | 13,940 | 10,659 | -3,281 | -24% |
| Virginia | 157,111 | 129,123 | -27,972 | -18% |
| Washington | 83,607 | 110,582 | 26,975 | 32% |
| West Virginia | 74,209 | 79,534 | 5,325 | 7% |
| Wisconsin | 95,872 | 121,332 | 25,582 | 27% |
| Wyoming | 7,428 | 12,386 | 4,958 | 67% |

## Exhibit 34
## Percentage Change in State Shares of the Nation's Poor School-Age Children, 1980 to 1990

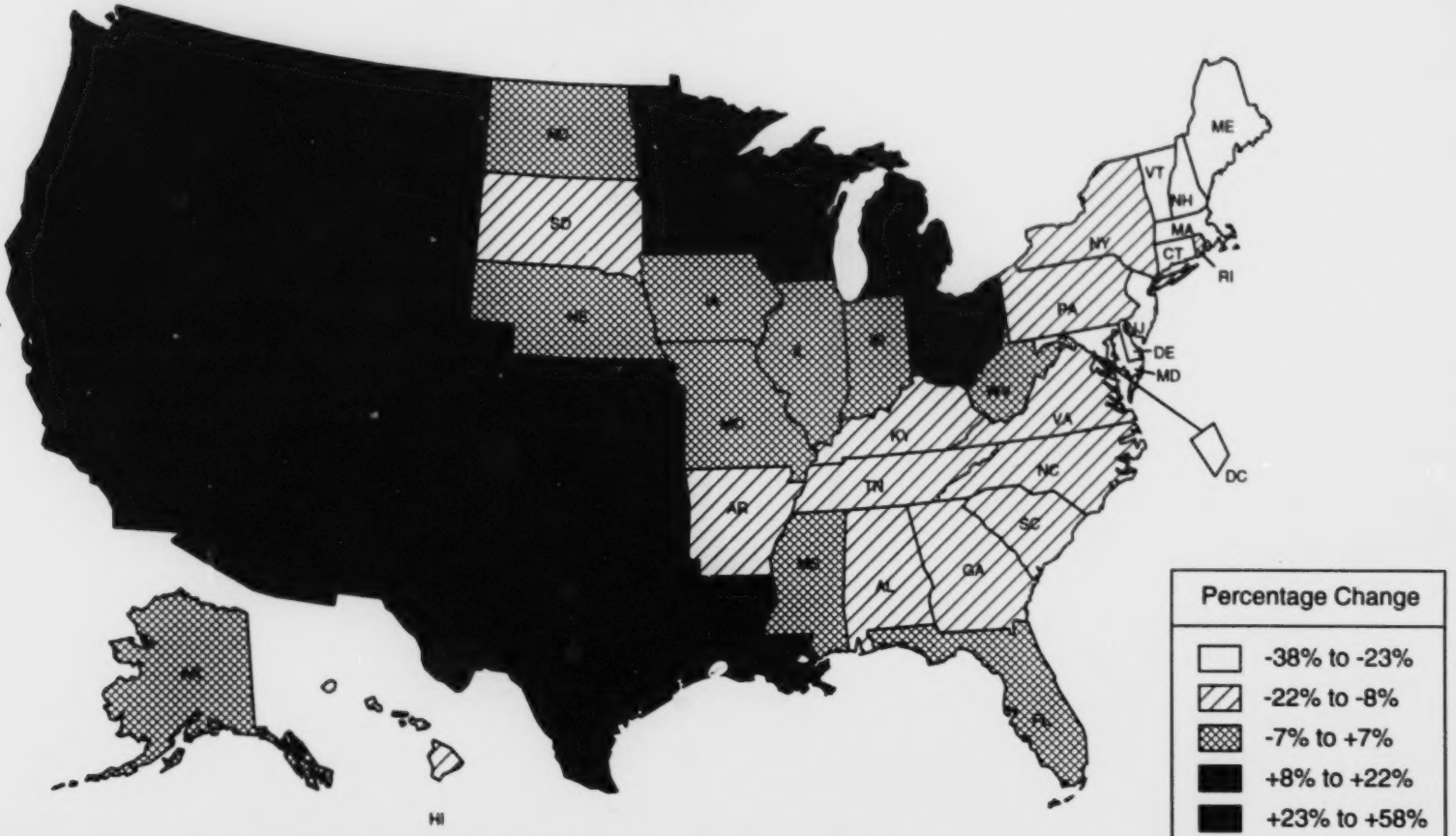



Exhibit reads: The percentage change in state shares of the nation's poor school-age children between 1980 and 1990 shows a demographic shift to the West. States like Maine now have a decreased share of the nation's poor children, while the share of poor children in states such as California grew.

Source: 1990 Census (U.S. Department of Commerce, 1992).

## Exhibit 35
## State Poverty Rates for School-Age Children, 1990

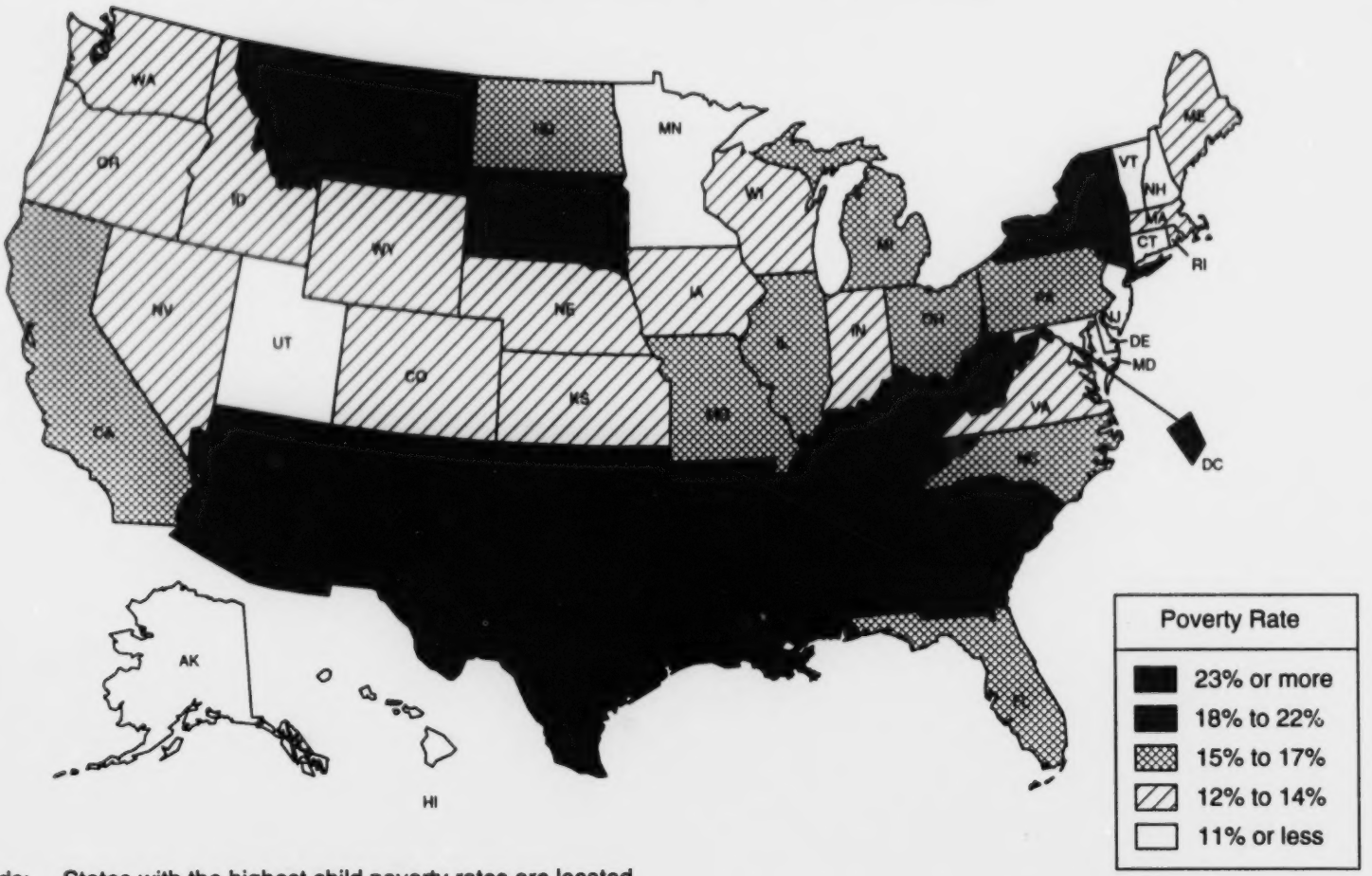



Exhibit reads: States with the highest child poverty rates are located predominantly in the South.

U.S. average = 18%

Source: 1990 Census (U.S. Department of Commerce, 1992).

than if their allocations were still based on the 1980 census, and 26 states would lose up to 37 percent of their allocations.

## *The Impact of Poverty Shifts Between 1980 and 1990 on the Distribution of Funds*

In FY 1993, Chapter 1 funds will be distributed for the first time on the basis of the 1990 census. The three-year lag in the use of current census data, the 85 percent hold-harmless provision, and limits on large increases in Concentration Grant allocations mitigate the effects of shifting to the 1990 census.

**County-level impact.** A comparison of allocations based on the 1980 census and the 1990 census reveals that the shifts in child poverty will cause a reduction in funding to the counties in the highest poverty quartile (see exhibit 36). The percent of funds going to the counties with the 10 largest school districts will decrease from 20 percent to 19 percent.

**Exhibit 36**
**Shifting to the 1990 Census Poverty Counts**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula using the 1980 census | 45% | 23% | 19% | 13% | 20% |
| Current formula using the 1990 census | 43% | 26% | 20% | 11% | 19% |

Exhibit reads: Shifting to the 1990 census poverty counts will reduce the share of Chapter 1 funds directed to the highest poverty quartile of counties.

**State-level impact.** In contrast, the shift to the 1990 census will cause major changes in the distribution of Chapter 1 funding across the states (see exhibits 37 and 38). If there were no hold-harmless provision to phase in shifts over a number of years, 19 states would receive up to 46 percent more funding; 28 states would lose up to 37 percent of their allocations. Using the 1990 census data in the Chapter 1 formula results in more funding to western states and less funding to northeastern urban states.

## *Options for Reform*

The Chapter 1 legislative history is filled with disputes over the selection of an appropriate poverty measure for use in the Chapter 1 formula. The problem of using the decennial census poverty count as a poverty measure is well known and long-standing. Current measures of child poverty are necessary if Chapter 1 allocations are to reflect current needs. Four options are examined, as follows:

1. Working with the Census Bureau to obtain more current data on child poverty,
2. Aging the decennial census using percentage change in state enrollment,
3. Using the number of students eligible for the subsidized school lunch program to replace or adjust the decennial census counts of poor children, and
4. Allowing states to update poverty counts using the best data available.

## *Option 1: Working With Census Bureau to Obtain More Current Data on Child Poverty*

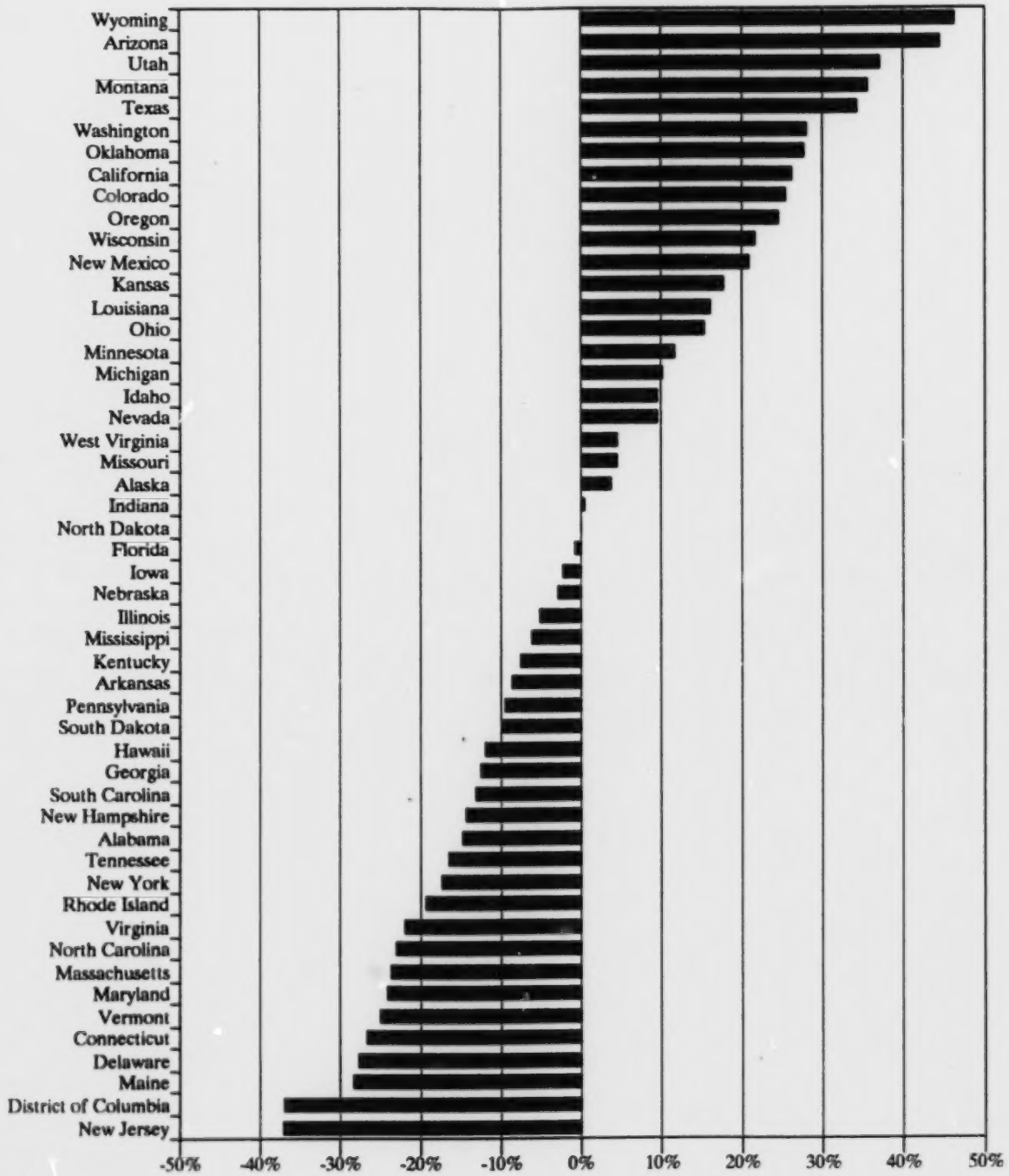
**Rationale.** The Census Bureau has proposed to develop methods for updating, every two years, the decennial county-level estimates of the number of poor children (U.S.

## Exhibit 37
## Shifting to the 1990 Census Poverty Counts
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Census Poverty Counts 1980 | Census Poverty Counts 1990 | Difference | Percentage Change |
|---|---|---|---|---|
| Alabama | $134,786 | $114,719 | -$20,067 | -15% |
| Alaska | 10,952 | 11,364 | 412 | 4% |
| Arizona | 63,131 | 91,258 | 28,127 | 45% |
| Arkansas | 74,859 | 68,379 | -6,480 | -9% |
| California | 527,048 | 664,724 | 137,677 | 26% |
| Colorado | 49,719 | 62,334 | 12,615 | 25% |
| Connecticut | 64,262 | 47,114 | -17,148 | -27% |
| Delaware | 16,756 | 12,128 | -4,628 | -28% |
| District of Columbia | 28,670 | 18,083 | -10,587 | -37% |
| Florida | 271,058 | 269,056 | -2,002 | -1% |
| Georgia | 179,003 | 156,652 | -22,350 | -12% |
| Hawaii | 18,947 | 16,689 | -2,258 | -12% |
| Idaho | 18,111 | 19,851 | 1,740 | 10% |
| Illinois | 299,053 | 283,664 | -15,389 | -5% |
| Indiana | 95,786 | 96,244 | 457 | 0% |
| Iowa | 46,223 | 45,180 | -1,043 | -2% |
| Kansas | 38,478 | 45,272 | 6,794 | 18% |
| Kentucky | 115,017 | 106,263 | -8,753 | -8% |
| Louisiana | 149,308 | 173,254 | 23,947 | 16% |
| Maine | 30,921 | 22,174 | -8,748 | -28% |
| Maryland | 101,982 | 77,405 | -24,577 | -24% |
| Massachusetts | 142,874 | 109,157 | -33,718 | -24% |
| Michigan | 241,477 | 266,081 | 24,604 | 10% |
| Minnesota | 66,879 | 74,623 | 7,744 | 12% |
| Mississippi | 121,614 | 114,058 | -7,556 | -6% |
| Missouri | 103,370 | 108,002 | 4,632 | 4% |
| Montana | 17,344 | 23,514 | 6,170 | 36% |
| Nebraska | 27,996 | 27,211 | -785 | -3% |
| Nevada | 14,731 | 16,133 | 1,402 | 10% |
| New Hamphire | 14,995 | 12,838 | -2,157 | -14% |
| New Jersey | 201,346 | 126,570 | -74,776 | -37% |
| New Mexico | 44,718 | 54,082 | 9,364 | 21% |
| New York | 673,141 | 556,321 | -116,820 | -17% |
| North Carolina | 153,781 | 118,303 | -35,479 | -23% |
| North Dakota | 15,180 | 15,180 | 0 | 0% |
| Ohio | 221,439 | 255,370 | 33,930 | 15% |
| Oklahoma | 59,852 | 76,415 | 16,563 | 28% |
| Oregon | 46,656 | 58,099 | 11,442 | 25% |
| Pennsylvania | 304,581 | 275,687 | -28,894 | -9% |
| Rhode Island | 23,577 | 19,022 | -4,555 | -19% |
| South Carolina | 97,189 | 84,348 | -12,841 | -13% |
| South Dakota | 18,895 | 17,038 | -1,857 | -10% |
| Tennessee | 132,506 | 110,730 | -21,776 | -16% |
| Texas | 397,041 | 532,606 | 135,565 | 34% |
| Utah | 21,411 | 29,338 | 7,926 | 37% |
| Vermont | 14,575 | 10,942 | -3,633 | -25% |
| Virginia | 118,955 | 92,885 | -26,070 | -22% |
| Washington | 66,147 | 84,666 | 18,519 | 28% |
| West Virginia | 57,445 | 60,076 | 2,630 | 5% |
| Wisconsin | 87,954 | 106,997 | 19,043 | 22% |
| Wyoming | 7,883 | 11,527 | 3,644 | 46% |

## Exhibit 38

## Effects of Shifting to the 1990 Census Poverty Counts




**Percentage Change in FY 1993 Allocations**

Exhibit reads: Shifting to the 1990 census poverty counts will increase funding to Wyoming by 46 percent while reducing New Jersey's funding by 37 percent.

Department of Commerce, Bureau of the Census, 1992). These estimates would combine data from the decennial census, annual federal income tax returns, and annual Census Bureau surveys (the March Current Population Survey and the Survey of Income and Program Participation). For Chapter 1, biennial county-level estimates of poor children would replace decennial census data, which become out-of-date as the decade progresses.

**Impacting.** The proposed project is experimental, and the reliability of the updated poverty estimates remains uncertain until they are produced and tested. Producing accurate estimates is most likely to be a problem for small rural counties. Although the Census Bureau cannot guarantee reliable county-level child poverty estimates until further research is funded, the proposal provides a promising alternative to decennial poverty counts for a relatively low cost (projected at $420,000 annually). Furthermore, even if county-level estimates prove unfeasible, the project would be able to provide state-level updates that capture regional shifts in the distribution of poor children. This project is not likely to provide reliable poverty estimates at the school district level, which could pose a problem for certain states that now use census data in making LEA allocations (Pelavin Associates, 1992).

## *Option 2: Aging the Decennial Census Poverty Counts Using Percentage Change in State Enrollment*

**Rationale.** This approach would adjust the census number of poor children in each county in proportion to the state's rate of growth or decline in enrollments (a variation of

an alternative suggested by Barro, 1991). This adjustment would capture state-level shifts in the population in school-age children but would not adjust for shifts within states. Using this adjustment assumes that the percent of poor children in each state remains constant, whereas use of the unadjusted census counts assumes that the absolute number of poor children in each state remains constant. Because the population of poor children may not shift in the same patterns as the population of school-age children as a whole, this method may underestimate or overestimate shifts in the distribution of poor children. However, because the current approach also becomes very inaccurate as the decade progresses, an important question is whether the error caused by this adjustment is smaller or greater than the error caused by making no adjustment.

A comparison with the 1990 census state-level counts of poor children reveals that the 1980 counts adjusted for percentage change in state enrollment are a more accurate predictor of 1990 poverty rates than is continued use of the unadjusted 1980 census (see exhibit 39). The average difference from the 1990 census is less, and the range of differences is narrower. Furthermore, only 8 states differ more than 10 percent from the 1990 census when the adjusted figures are used, compared with 19 states when the unadjusted numbers are used. Unfortunately, one does not know whether this aging approach is better because the evidence is for one time period only.

**County-level impact.** This option has little effect on the distribution of Chapter 1 funds across county poverty quartiles (see exhibit 40) or in the 10 counties containing the largest school districts (shown earlier in exhibit 32). This occurs because the update uses

**Exhibit 39**
**Accuracy in Predicting the 1990 Census Poverty Counts**
**1980 Census Counts Versus 1980 Counts Adjusted by Percentage Change in State Enrollment, 1980 to 1989**

| | Unadjusted 1980 Census | 1980 Census Adjusted by Percentage Change in State Enrollment |
|---|---|---|
| Average percentage difference | 20% | 16% |
| Average overestimate | 22% | 14% |
| Average underestimate | -17% | -17% |
| Maximum percent overestimated | 55% | 38% |
| Maximum percent underestimated | -36% | -37% |
| Number of states overestimated | 29 | 13 |
| Number of states underestimated | 23 | 39 |
| Number of states overestimated by more than 10% | 19 | 8 |
| Number of states underestimated by more than -10% | 15 | 27 |

Exhibit reads: 1980 census poverty counts adjusted by using the percentage change in state enrollment from 1980 to 1989 are a better predictor of 1990 poverty counts than is the unadjusted 1980 census.

only state-level change in enrollment, (annual, nationally-uniform data are available only for states and not for counties). However, states might be permitted or required to adjust subcounty allocations in a similar manner using data available within each state (e.g., state data on school district enrollments).

**State-level impact.** By using the same procedure as described for the county-level simulations, one can examine the interstate redistributive effect of allocating Chapter 1 according to poverty percentages instead of constant poverty numbers. As expected, this approach captures the general demographic changes occurring in the 1980s and shifts funds from states with slow-growing or declining populations to states whose populations

**Exhibit 40**
**"Aging" the Decennial Census Poverty Counts**
**Using the Percentage Change in State Enrollment**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula using the 1990 census | 43% | 26% | 20% | 11% | 19% |
| Current formula using the 1980 census | 45% | 23% | 19% | 13% | 20% |
| Aging the 1980 census using percentage change in state enrollment | 43% | 27% | 20% | 10% | 19% |

Exhibit reads: Adjusting the 1980 census poverty counts using the percentage change in state enrollments between 1979 and 1989 would produce approximately the same distribution of funds among county poverty quartiles as would using the 1990 census; however, it would provide less funding to the highest poverty quartile than would using the unadjusted 1980 census.

are growing at above-average rates (see exhibits 31 and 41). States that would gain the most are southern and western states; the major industrial states of the Northeast and Midwest would lose funding.

## *Option 3: Using Counts of Students Eligible for the Subsidized School Lunch Program to Replace or Adjust the Decennial Census Count of Poor Children*

**Rationale.** A frequently mentioned alternative to the decennial census poverty data is counts of children eligible for free (or free and reduced-price) school lunches. The number of children eligible for the federally subsidized school lunch program is arguably a reasonable proxy for the incidence of poverty because eligibility is based on low family income. States collect this information annually at the school district level — although

## Exhibit 41

### Effects of "Aging" the Decennial Census Poverty Counts by Using the Percentage Change in State Enrollment

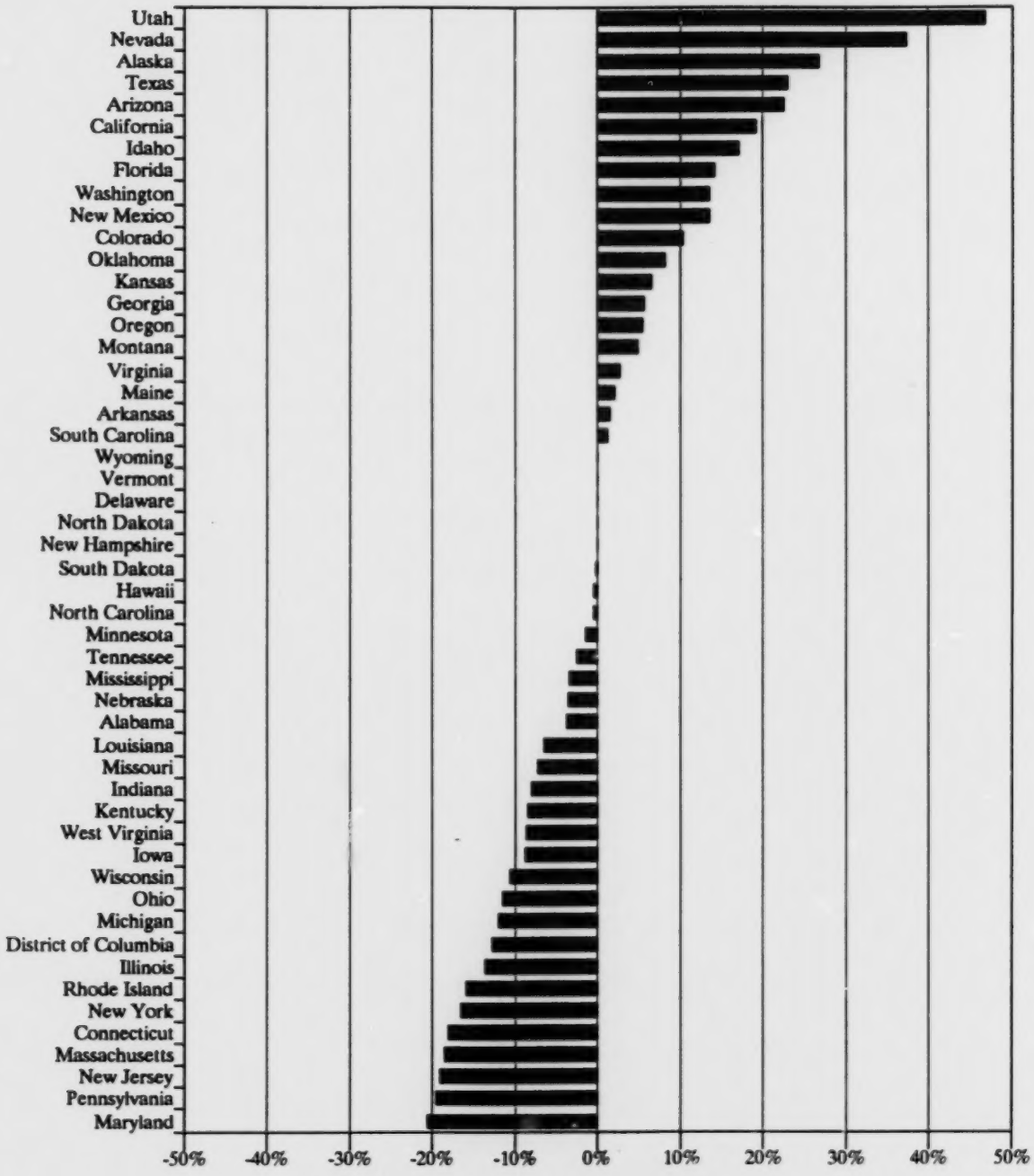



Exhibit reads: Adjusting the 1980 census poverty counts using the percentage change in state enrollments between 1979 and 1989 would generate allocations in some states very different from those generated by using the 1990 census. Utah would receive 47 percent more funding and Maryland would receive 21 percent less.

they are currently not required to report the data to the federal government — so this alternative could permit allocation of Chapter 1 funds to the district level using relatively current data.

This option seems appealing at first glance, but it has several important drawbacks. First, because the subsidized school lunch program uses a looser definition of poverty (up to 130 percent of the poverty line for free school lunch and up to 185 percent for reduced-price school lunch) using this measure could reduce the targeting of Chapter 1 funds on the poorest children. In addition, subsidized school lunch counts exclude many poor children. Many children of illegal aliens, who represent a large percent of the poor in some communities, do not apply for the program. The measure also tends to undercount high school students, many of whom do not apply for the program because they perceive a social stigma, as well as students in many private schools that do not participate in the subsidized lunch program.

A state-by-state comparison of subsidized school lunch counts and census poverty counts for a comparable year suggests that data on students eligible for the school lunch program are not collected in a uniform manner. In 1990, free lunch counts ranged from 106 percent of the census poverty count in Montana to 184 percent in Hawaii (see exhibit 42). Thus, using free lunch counts would cause substantial funding shifts that do not seem justified when compared with the more uniformly implemented census counts of child poverty.

## Exhibit 42
## Poor Children by State
## 1990 Census, Free School Lunch Eligibles, and Free and Reduced-Price School Lunch Eligibles

| State | Number of Eligibles | | | Percent of Census Poverty Count | |
|---|---|---|---|---|---|
| | Census Poverty Count | Free Lunch | Free and Reduced-Price Lunch | Free Lunch | Free and Reduced-Price Lunch |
| Alabama | 177,908 | 266,457 | 315,199 | 150% | 177% |
| Alaska | 10,887 | 16,170 | 21,609 | 149% | 198% |
| Arizona | 136,177 | 177,796 | 215,065 | 131% | 158% |
| Arkansas | 106,675 | 141,507 | 167,985 | 133% | 157% |
| California | 894,202 | 1,465,181 | 1,715,970 | 164% | 192% |
| Colorado | 81,787 | 108,346 | 140,934 | 132% | 172% |
| Connecticut | 50,309 | 68,271 | 85,508 | 136% | 170% |
| Delaware | 12,327 | 18,433 | 22,539 | 150% | 183% |
| District of Columbia | 18,355 | 32,302 | 37,457 | 176% | 204% |
| Florida | 343,642 | 601,923 | 730,420 | 175% | 213% |
| Georgia | 228,344 | 387,687 | 474,363 | 170% | 208% |
| Hawaii | 20,303 | 37,355 | 51,404 | 184% | 253% |
| Idaho | 32,064 | 42,919 | 59,222 | 134% | 185% |
| Illinois | 327,904 | 470,476 | 539,965 | 143% | 165% |
| Indiana | 132,403 | 163,203 | 199,289 | 123% | 151% |
| Iowa | 65,066 | 86,467 | 113,477 | 133% | 174% |
| Kansas | 59,370 | 82,844 | 110,092 | 140% | 185% |
| Kentucky | 160,547 | 211,474 | 253,800 | 132% | 158% |
| Louisiana | 267,035 | 379,174 | 435,856 | 142% | 163% |
| Maine | 26,703 | 34,167 | 47,836 | 128% | 179% |
| Maryland | 82,451 | 128,810 | 163,727 | 156% | 199% |
| Massachusetts | 112,193 | 133,920 | 163,988 | 119% | 146% |
| Michigan | 287,678 | 312,732 | 367,260 | 109% | 128% |
| Minnesota | 93,010 | 126,140 | 171,036 | 136% | 184% |
| Mississippi | 177,433 | 267,064 | 306,897 | 151% | 173% |
| Missouri | 150,289 | 208,376 | 251,306 | 139% | 167% |
| Montana | 29,257 | 31,013 | 39,885 | 106% | 136% |
| Nebraska | 36,560 | 49,668 | 70,039 | 136% | 192% |
| Nevada | 22,931 | 24,077 | 30,614 | 105% | 134% |
| New Hampshire | 12,094 | 13,796 | 19,854 | 114% | 164% |
| New Jersey | 134,093 | 211,406 | 257,441 | 158% | 192% |
| New Mexico | 82,713 | 117,473 | 140,619 | 142% | 170% |
| New York | 530,668 | 824,455 | 989,234 | 155% | 186% |
| North Carolina | 180,305 | 278,076 | 353,901 | 154% | 196% |
| North Dakota | 19,892 | 23,088 | 30,990 | 116% | 156% |
| Ohio | 321,349 | 373,909 | 443,144 | 116% | 138% |
| Oklahoma | 119,464 | 162,159 | 205,083 | 136% | 172% |
| Oregon | 67,586 | 90,041 | 114,381 | 133% | 169% |
| Pennsylvania | 283,919 | 315,587 | 393,276 | 111% | 139% |
| Rhode Island | 19,208 | 25,488 | 31,190 | 133% | 162% |
| South Carolina | 130,600 | 202,109 | 247,638 | 155% | 190% |
| South Dakota | 26,474 | 35,769 | 47,868 | 135% | 181% |
| Tennessee | 168,816 | 241,619 | 286,588 | 143% | 170% |
| Texas | 791,190 | 1,136,392 | 1,312,821 | 144% | 166% |
| Utah | 48,940 | 56,229 | 83,928 | 115% | 171% |
| Vermont | 10,659 | 12,301 | 16,439 | 115% | 154% |
| Virginia | 129,123 | 180,937 | 229,296 | 140% | 178% |
| Washington | 110,582 | 146,335 | 184,146 | 132% | 167% |
| West Virginia | 79,534 | 107,139 | 129,001 | 135% | 162% |
| Wisconsin | 121,332 | 143,144 | 179,663 | 118% | 148% |
| Wyoming | 12,386 | 16,102 | 21,764 | 130% | 176% |

Exhibit reads: Counts of students eligible for the free school lunch program are 184 percent of the census poverty count in Hawaii, but only 106 percent of census poverty in Montana.

Note: Counts of students eligible for subsidized school lunches are from 1989, the same year that the 1990 census was taken. The lunch counts were obtained from the U.S. Department of Agriculture, Food and Nutrition Service.

Using the annual change in free lunch participation to adjust the decennial census poverty count — instead of as a substitute for the census count — might avoid the bias against districts where many eligible students do not sign up for the free lunch program. However, this could bias allocations in the opposite direction by rewarding districts with large increases in their Chapter 1 allocations, simply for increasing their efforts to enroll students in the free lunch program. Large increases in free lunch counts could result from changes in district policies and practices, as well as from actual increases in the number of poor children.

**County-level impact.**[4] Shifting to free school lunch counts would not change the distribution of funds across county poverty quartiles. Counties in both the highest poverty and the second-highest poverty quartiles would receive no benefit from this option (see exhibit 43). However, each of the 10 counties with the highest concentrations of poverty would lose $207 per eligible student under this option (see appendix A). The share of Chapter 1 funds received by counties with the 10 largest school districts would increase by one percentage point (see exhibit 43).

To estimate the redistributive effects of this option across counties, county-level data on the counts of free school lunch eligibles were collected from five states: Maryland,

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[4]At a national level, the only available data on eligibility for the free school lunch program are the total number for each state. The county-level estimates presented in exhibit 43 assume the same proportion of eligible children for the free school lunch program as the proportion of Chapter 1-eligible children in a particular county. Each state's FY 1993 Chapter 1 funds were allocated to a particular county according to its number of free school lunch eligibles derived from using the same percentage of Chapter 1-eligible children in that county. The figures reported in exhibit 43 should be cautiously interpreted; they are best viewed as rough estimates rather than precise calculations.

**Exhibit 43**
**Substituting Free School Lunch Counts for Census Poverty Counts**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula | 43% | 26% | 20% | 11% | 19% |
| Free school lunch counts | 43% | 26% | 20% | 11% | 20% |

Exhibit reads: Replacing 1990 census poverty counts with state-level counts of students eligible for the free school lunch program in 1989 would not change the distribution of funds among counties by poverty quartile.

Michigan, New York, Texas, and Washington. As expected, replacing the 1990 census poverty counts with the free school lunch counts would increase the number of poor children, thus spreading Chapter 1 funds. The number of counties that would receive increases in Chapter 1 funding ranges from a low of 21 in Maryland to a high of 206 in Texas and is much larger than the number of counties that would receive decreases in Chapter 1 funding, so the average allocation per county would fall (see exhibit 44).

**State-level impact.** Substantial reallocations of Chapter 1 funds across the states would occur under this option because the distribution of child counts for free school lunches is quite different from the distribution of poor children counted in the 1990 census. A comparison of state allocations using the 1990 free school lunch counts with allocations based on the 1990 census reveals variations of up to 44 percent (see exhibits 31 and 45). States gaining more than 10 percent are Hawaii, Florida, the District of Columbia,

**Exhibit 44**
**Substituting Free School Lunch Counts for Census Poverty Counts**
**Effects on the Distribution of FY 1993 Funds Across Counties**
**in Five Selected States**

| | Washington | Maryland | New York | Michigan | Texas |
|---|---|---|---|---|---|
| Average percentage differences | 29% | 33% | 39% | 20% | 33% |
| Average gain | 27% | 36% | 42% | 24% | 35% |
| Average loss | -38% | -10% | -7% | -17% | -24% |
| Maximum gain | 121% | 112% | 132% | 80% | 250% |
| Maximum loss | -100% | -18% | -19% | -100% | -100% |
| Number of counties gaining | 31 | 21 | 56 | 53 | 206 |
| Number of counties losing | 8 | 3 | 6 | 30 | 46 |
| Number of counties with gain greater than 10% | 24 | 17 | 52 | 38 | 180 |
| Number of counties with loss greater than -10% | 5 | 1 | 2 | 17 | 28 |

Exhibit reads: Replacing 1990 census poverty counts with county-level counts of students eligible for the free school lunch program spreads Chapter 1 to less needy counties.

Georgia, Maryland, New Jersey, North Carolina, South Carolina, and California. States losing more than 15 percent of their allocations are Wisconsin, Utah, Ohio, Pennsylvania, Michigan, Montana, and Massachusetts.

## *Option 4: Allowing States to Update Poverty Counts Using Best Data Available*

**Rationale.** States may currently use poverty measures other than the decennial census in making suballocations to LEAs, as long as the LEA boundaries do not cross county lines, but states may not reallocate funds across counties. Removing this restriction

## Exhibit 45

### Effects of Substituting Free School Lunch Counts for Census Poverty Counts

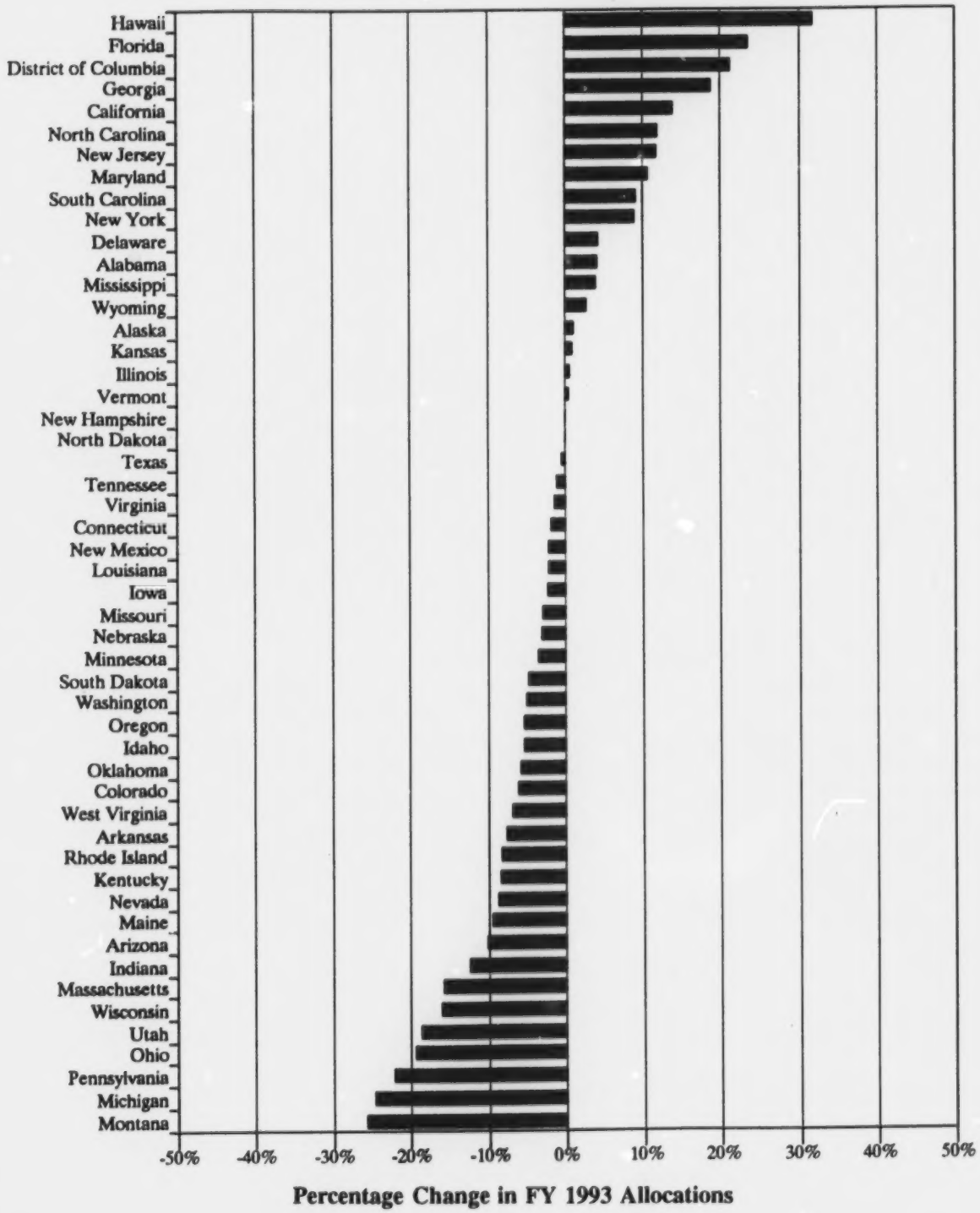



Exhibit reads: Replacing the 1990 census poverty counts with counts of students eligible for the free school lunch program in that year would increase funding to Hawaii by 32 percent while reducing Montana's funding by 26 percent.

would enable states to disregard the county allocations and distribute funds to LEAs solely on the basis of the poverty measure that the states deem most current and reliable. Although this alternative does not deal with shifts in the distribution of poor children across states, it allows adjustments for shifts within-state. To assure that funds are allocated fairly, this option would need to be accompanied by specific guidelines for how states could use alternative poverty measures to update the census data.

Concerns also exist about the accuracy and completeness of the alternative poverty measures available to states. For example, as discussed earlier, data on free and reduced-price school lunches tend to undercount high school students and children of illegal immigrants, while AFDC data do not include the working poor.

## *Conclusion*

Some critics of the current Chapter 1 formula for determining eligibility contend that the decennial census should be replaced in the formula because the census is updated only every 10 years. This section examined the use of alternative poverty definitions for which more current data are available. Altering the definition of who is eligible for Chapter 1 funding tends to expand the number of children eligible and to reduce targeting. In addition, the available alternatives have problems of their own, particularly inconsistencies in state-level data that would cause large and somewhat arbitrary shifts in the distribution of funds.

# V

# *Adjustments for Differences in the Cost of Education*

Equal dollars do not necessarily by equal educational services. Since 1976 when a formula adjustment for interstate differences in the cost of education was introduced its appropriateness has been questioned. The current Chapter 1 formula attempts to compensate for differences in the cost of education across states by adjusting county allocations using state average per-pupil expenditure (SPPE); this adjustment is limited to between 80 and 120 percent of the national average. This section examines the current cost of adjustment factor and potential replacements.

## *Section Summary*

The adjustment for geographic differences in the cost of education has been the subject of considerable congressional debate. The state per-pupil expenditure factor has been criticized as an inaccurate cost proxy, because it tends to underestimate costs in low-income, low-expenditure states; as a result, states that are needier to begin with get less federal help.

Eliminating the cost factor (e.g., by substituting national average per-pupil expenditures for average per-pupil state expenditures, as proposed last year by Senator Orrin Hatch) would mainly shift funds away from high-income northeastern states to low-income

southern states. However, this approach fails to take into account the legitimacy of documented cost differences among the states. Eliminating the cost factor would cause large funding shifts among states; six northeastern states would each lose 21 percent of their funding (see exhibit 46).

Limiting the range of the current cost factor to between 90 and 110 percent of the national average would weaken the impact of the cost factor but still retain some adjustment for interstate cost differences. This option produces a redistribution similar to that produced by eliminating the state per-pupil expenditure factor, with gains in the southern states and losses in the northern states, but the shifts are less dramatic (eight northeastern states would each lose 10 percent).

Available alternative cost indicators such as average teacher salaries and private-sector wages probably approximate interstate differences in costs more closely but have important shortcomings of their own. Although the two wage indexes generally produce similar redistributive patterns, there are also significant differences. Thirteen states that would gain under one wage index would lose under the other, notably Texas, which would lose 2 percent under the teacher salary index but gains 16 percent under the private-sector wage index. Both indexes primarily would benefit California, which would is the state most unfairly treated by the current cost proxy. Teacher salaries and private-sector wages in California both reflect the state's high cost of living, but California loses funds under the current cost proxy because its education expenditures are well below the national average. Because California receives by far the largest Chapter 1 allocation of

## Exhibit 46
## Options for Alternative Cost of Education Factors
## Effects on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Eliminate Cost Factor | | SPPE Factor with 90%-110% Range | | Teacher Salary | | General Wage Index | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| Alabama | $114,719 | $136,231 | 19% | $127,011 | 11% | $111,420 | -3% | $119,273 | 4% |
| Alaska | 11,364 | 11,360 | 0% | 11,360 | 0% | 11,388 | 0% | 11,363 | 0% |
| Arizona | 91,258 | 105,322 | 15% | 98,199 | 8% | 98,905 | 8% | 96,501 | 6% |
| Arkansas | 68,379 | 81,202 | 19% | 75,706 | 11% | 59,034 | -14% | 63,655 | -7% |
| California | 664,724 | 727,232 | 9% | 678,015 | 2% | 881,166 | 33% | 829,204 | 25% |
| Colorado | 62,334 | 61,581 | -1% | 61,361 | -2% | 59,683 | -4% | 60,813 | -2% |
| Connecticut | 47,114 | 37,329 | -21% | 42,519 | -10% | 50,118 | 6% | 47,505 | 1% |
| Delaware | 12,128 | 12,128 | 0% | 12,128 | 0% | 12,128 | 0% | 12,128 | 0% |
| District of Columbia | 18,083 | 15,401 | -15% | 16,312 | -10% | 17,345 | -4% | 21,131 | 17% |
| Florida | 269,056 | 260,848 | -3% | 264,809 | -2% | 244,936 | -9% | 236,348 | -12% |
| Georgia | 156,652 | 174,522 | 11% | 162,699 | 4% | 155,066 | -1% | 167,013 | 7% |
| Hawaii | 16,689 | 16,012 | -4% | 16,463 | -1% | 15,999 | -4% | 15,980 | -4% |
| Idaho | 19,851 | 23,585 | 19% | 21,983 | 11% | 18,411 | -7% | 19,216 | -3% |
| Illinois | 283,664 | 256,477 | -10% | 279,190 | -2% | 271,904 | -4% | 279,387 | -2% |
| Indiana | 96,244 | 97,813 | 2% | 94,747 | -2% | 97,757 | 2% | 91,615 | -5% |
| Iowa | 45,180 | 47,889 | 6% | 44,626 | -1% | 41,090 | -9% | 39,493 | -13% |
| Kansas | 45,272 | 46,277 | 2% | 44,567 | -2% | 42,047 | -7% | 40,047 | -12% |
| Kentucky | 106,263 | 122,444 | 15% | 114,157 | 7% | 108,799 | 2% | 104,710 | -1% |
| Louisiana | 173,254 | 205,720 | 19% | 191,808 | 11% | 166,182 | -4% | 182,207 | 5% |
| Maine | 22,174 | 20,086 | -9% | 21,865 | -1% | 17,842 | -20% | 17,611 | -21% |
| Maryland | 77,405 | 61,320 | -21% | 69,851 | -10% | 73,047 | -6% | 65,551 | -15% |
| Massachusetts | 109,157 | 86,463 | -21% | 98,498 | -10% | 95,146 | -13% | 100,350 | -8% |
| Michigan | 266,081 | 224,418 | -16% | 255,700 | -4% | 267,373 | 0% | 242,180 | -9% |
| Minnesota | 74,623 | 71,410 | -4% | 73,460 | -2% | 72,091 | -3% | 70,520 | -5% |
| Mississippi | 114,058 | 135,436 | 19% | 126,275 | 11% | 101,199 | -11% | 103,410 | -9% |
| Missouri | 108,002 | 114,989 | 6% | 107,193 | -1% | 99,844 | -8% | 107,701 | 0% |
| Montana | 23,514 | 22,628 | -4% | 23,142 | -2% | 18,506 | -21% | 17,508 | -26% |
| Nebraska | 27,211 | 28,677 | 5% | 26,787 | -2% | 23,450 | -14% | 23,065 | -15% |
| Nevada | 16,133 | 17,231 | 7% | 16,136 | 0% | 17,055 | 6% | 16,544 | 3% |
| New Hamphire | 12,838 | 12,838 | 0% | 12,838 | 0% | 12,838 | 0% | 12,838 | 0% |
| New Jersey | 126,570 | 100,256 | -21% | 114,211 | -10% | 117,409 | -7% | 124,523 | -2% |
| New Mexico | 54,082 | 64,217 | 19% | 59,874 | 11% | 50,578 | -6% | 53,608 | -1% |
| New York | 556,321 | 440,490 | -21% | 501,904 | -10% | 569,286 | 2% | 547,103 | -2% |
| North Carolina | 118,303 | 132,043 | 12% | 123,070 | 4% | 118,640 | 0% | 115,611 | -2% |
| North Dakota | 15,180 | 15,188 | 0% | 15,180 | 0% | 15,180 | 0% | 15,180 | 0% |
| Ohio | 255,370 | 246,414 | -4% | 251,338 | -2% | 246,310 | -4% | 240,830 | -6% |
| Oklahoma | 76,415 | 90,747 | 19% | 84,604 | 11% | 67,805 | -11% | 78,527 | 3% |
| Oregon | 58,099 | 51,048 | -12% | 57,190 | -2% | 50,507 | -13% | 47,293 | -19% |
| Pennsylvania | 275,687 | 218,342 | -21% | 248,752 | -10% | 240,278 | -13% | 220,065 | -20% |
| Rhode Island | 19,022 | 15,180 | -20% | 17,162 | -10% | 16,121 | -15% | 15,180 | -20% |
| South Carolina | 84,348 | 99,416 | 18% | 92,680 | 10% | 86,325 | 2% | 84,005 | 0% |
| South Dakota | 17,038 | 20,239 | 19% | 18,866 | 11% | 15,180 | -11% | 15,180 | -11% |
| Tennessee | 110,730 | 131,491 | 19% | 122,593 | 11% | 114,183 | 3% | 117,801 | 6% |
| Texas | 532,606 | 602,509 | 13% | 561,739 | 5% | 511,034 | -4% | 594,984 | 12% |
| Utah | 29,338 | 34,869 | 19% | 32,495 | 11% | 27,455 | -6% | 30,175 | 3% |
| Vermont | 10,942 | 10,942 | 0% | 10,942 | 0% | 10,942 | 0% | 10,942 | 0% |
| Virginia | 92,885 | 94,422 | 2% | 91,432 | -2% | 93,420 | 1% | 93,245 | 0% |
| Washington | 84,666 | 84,846 | 0% | 83,343 | -2% | 85,658 | 1% | 83,788 | -1% |
| West Virginia | 60,076 | 60,855 | 1% | 59,121 | -2% | 48,544 | -19% | 53,899 | -10% |
| Wisconsin | 106,997 | 89,712 | -16% | 102,190 | -4% | 91,470 | -15% | 81,288 | -24% |
| Wyoming | 11,527 | 11,527 | 0% | 11,527 | 0% | 11,527 | 0% | 11,527 | 0% |

Sources: Teacher salary figures are from 1991-92 Estimates of School Statistics, Table 7 (Washington, D.C.: National Education Association, 1992); General Wage Index is from Employment and Wages, Annual Averages, 1991, Table 3 (Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, November 1991).

any state (about 10 percent of all Chapter 1 funds), major increases for California necessarily cause major reductions in funding for many other states.

## *The Current Adjustment for Interstate Differences in Education Costs*

School districts in different parts of the country face different prices when they purchase equivalent educational services; for example, the salaries of teachers and other staff reflect geographical variations in labor market conditions and cost of living. Recently, cost-of-living estimates for states have been synthesized by McMahon and Chang (1991), who found that in 1990 there was a 42 percent variation in the purchasing power of education dollars between the highest- and lowest-cost states in the continental United States, and a 57 percent variation if Hawaii and Alaska are included.

An adjustment for interstate differences in the cost of education was introduced into the Chapter 1 formula in 1976. Lacking a national cost-of-education index, the formula has relied on state average per-pupil expenditures as a proxy for cost differences. The limits on the range of the current cost adjustment (between 80 and 120 percent of the national average) were selected to approximate the range in state average teacher salaries at the time the cost factor was adopted. According to National Education Association data for 1990-91, average teacher salaries still vary within roughly the same bounds.

The state per-pupil expenditure factor is clearly an imperfect cost adjustment, reflecting not only cost differences among states but also other noncost factors such as state fiscal

capacity and preferences for spending on education. The inclusion of the expenditure factor in the formula offsets some differences in cost and skews the Chapter 1 allocations in favor of states that spend above-average amounts on education because they are wealthy or because they are more willing to support education. In FY 1993 the per-pupil expenditure factor redistributed $364 million — 6 percent of Chapter 1 funds — mainly away from relatively low-income states in the South to relatively high income states in the Northeast.

The current cost adjustment is applied uniformly to all counties within a state, but costs may vary considerably more within states than across states. The current formula does not adjust for cost differences within states. No national cost index exists that permits comparisons at the substate level.

## *Options for Reform*

Four alternatives to the current cost factor are examined here:

1. Eliminating the cost factor (by using the national per-pupil expenditure average),
2. Narrowing the range of the state per-pupil expenditure factor,
3. Using a teacher salary index as a proxy for interstate cost differences, and
4. Using a general wage index as a proxy for interstate cost differences.

Sections 3 and 4 of this report focused on the effects of a particular option for increasing the targeting of funds on the poorest counties. Alternative cost factors, in contrast, are

intended not to improve targeting but to equalize the purchasing power of Chapter 1 assistance across high-cost and low-cost states. In fact, all the cost options examined here would have very small effects on the distribution of funds by county poverty quartile (see exhibit 47).

**Exhibit 47**
**Options for Alternative Cost of Education Factors**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula | 43% | 26% | 19% | 10% | 19% |
| Eliminating cost factor | 44% | 27% | 19% | 10% | 18% |
| Limiting SPPE range to 90%-110% | 44% | 27% | 19% | 10% | 18% |
| Using teacher salary index | 43% | 27% | 20% | 11% | 20% |
| Using private-sector wage index | 43% | 27% | 19% | 10% | 20% |

Exhibit reads: The cost factor options examined here would have little impact on the distribution of Chapter 1 funds by county poverty quartile.

## *Option 1: Eliminating the Cost Factor (by Using the National Per-pupil Expenditure Average)*

**Rationale.** The current cost-of-education factor substantially alters the distribution of Chapter 1 funds from a distribution based solely on numbers of poor children, shifting $364 million in FY 1993. Some critics have suggested entirely eliminating this factor from the formula, on the ground that it benefits high-income states at the expense of low-income states. As already mentioned, the amendment proposed by Senator Hatch in

1992 would have accomplished this by substituting the national average per-pupil expenditure for the state expenditure factor.

**State-level impact.** Substituting the national average per-pupil expenditure would shift funds mainly away from northeastern states to southern states (see exhibits 46 and 48). The major losers are high-income, mainly industrial states, such as New York, Pennsylvania, Massachusetts, New Jersey, Maryland, and Connecticut, which would lose 21 percent of their funds. Funding gains of 19 percent would occur in 12 low-expenditure states; most of them in the South: Alabama, Arkansas, Idaho, Kentucky, Louisiana, Mississippi, Oklahoma, South Carolina, South Dakota, Tennessee, New Mexico, and Utah.

Although it is true that income levels are generally higher in high-expenditure states, costs also are higher and the same dollar buys fewer services. Moreover, because the national poverty line does not adjust for regional differences in the cost of living, the current formula already undercounts poor children in states where the cost of living is high. Eliminating the cost-of-education factor would cause large reductions in funding (up to 21 percent) in many poor urban counties in the Northeast and Midwest. Many of these areas are already slated to lose large proportions of their funding when the 1990 census data are used for the first time in the FY 1993 allocations. Eliminating the cost-of-education factor would further increase losses to many states.

## Exhibit 48

## Effects of Eliminating the Cost-of-Education Factor

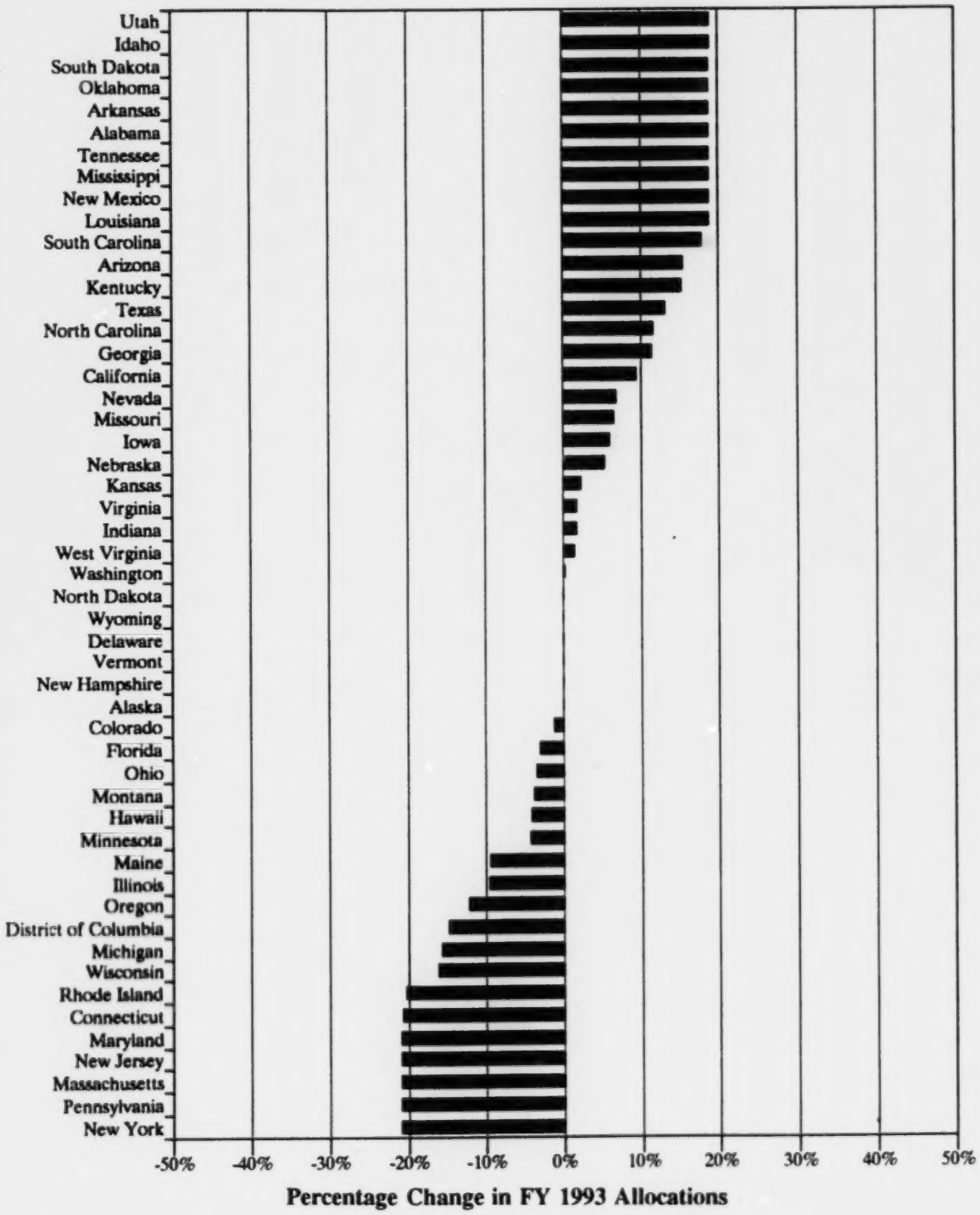



Exhibit reads: Eliminating the cost factor (by substituting national average per-pupil expenditures for state per-pupil expenditures) would increase funding to Utah by 19 percent while reducing New York's funding by 21 percent.

**County-level impact.** This option would have a large impact on some of the counties containing the 10 largest school districts, although the impact would vary considerably across these districts (see exhibit 49). Eliminating the cost factor would cause funding reductions of up to 21 percent in many needy urban counties, including New York City, Trenton, and Boston. Many of these areas are already slated to lose large percentages of their funding when the 1990 census data are used for the first time in the FY 1993 allocations. The change in their allocations would range from an increase of 13 percent in Houston and Dallas to a 21 percent decrease in New York and Philadelphia.

**Exhibit 49**
**Options for Alternative Cost of Education Factors**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| Counties | Current Formula | Eliminating the Cost-of-Education Factor | | Using a SPPE Factor with 90%-110% Range | | Using a Teacher Salary | | Using a General Wage Index | |
|---|---|---|---|---|---|---|---|---|---|
| | | Allocation | Change | Allocation | Change | Allocation | Change | Allocation | Change |
| New York, NY | $367,848 | $291,186 | -21% | $331,827 | -10% | $376,356 | 2% | $361,659 | -2% |
| Los Angeles, CA | 242,248 | 264,999 | 9% | 247,079 | 2% | 321,102 | 33% | 302,156 | 25% |
| Chicago, IL | 170,332 | 153,960 | -10% | 167,620 | -2% | 163,235 | -4% | 167,710 | -2% |
| Miami, FL | 60,380 | 58,521 | -3% | 59,418 | -2% | 54,956 | -9% | 53,024 | -12% |
| Philadelphia, PA | 75,952 | 60,123 | -21% | 68,515 | -10% | 66,174 | -13% | 60,596 | -20% |
| Houston, TX | 76,051 | 86,025 | 13% | 80,207 | 5% | 72,966 | -4% | 84,950 | 12% |
| Detroit, MI | 104,853 | 88,408 | -16% | 100,747 | -4% | 105,339 | 0% | 95,403 | -9% |
| Ft. Lauderdale, FL | 19,181 | 18,599 | -3% | 18,880 | -2% | 17,463 | -9% | 16,852 | -12% |
| Fairfax, VA | 3,311 | 3,370 | 2% | 3,261 | -2% | 3,333 | 1% | 3,328 | 1% |
| Dallas, TX | 41,006 | 46,384 | 13% | 43,248 | 5% | 39,343 | -4% | 45,805 | 12% |

## *Option 2: Narrowing the Range of the State Per-pupil Expenditure Factor*

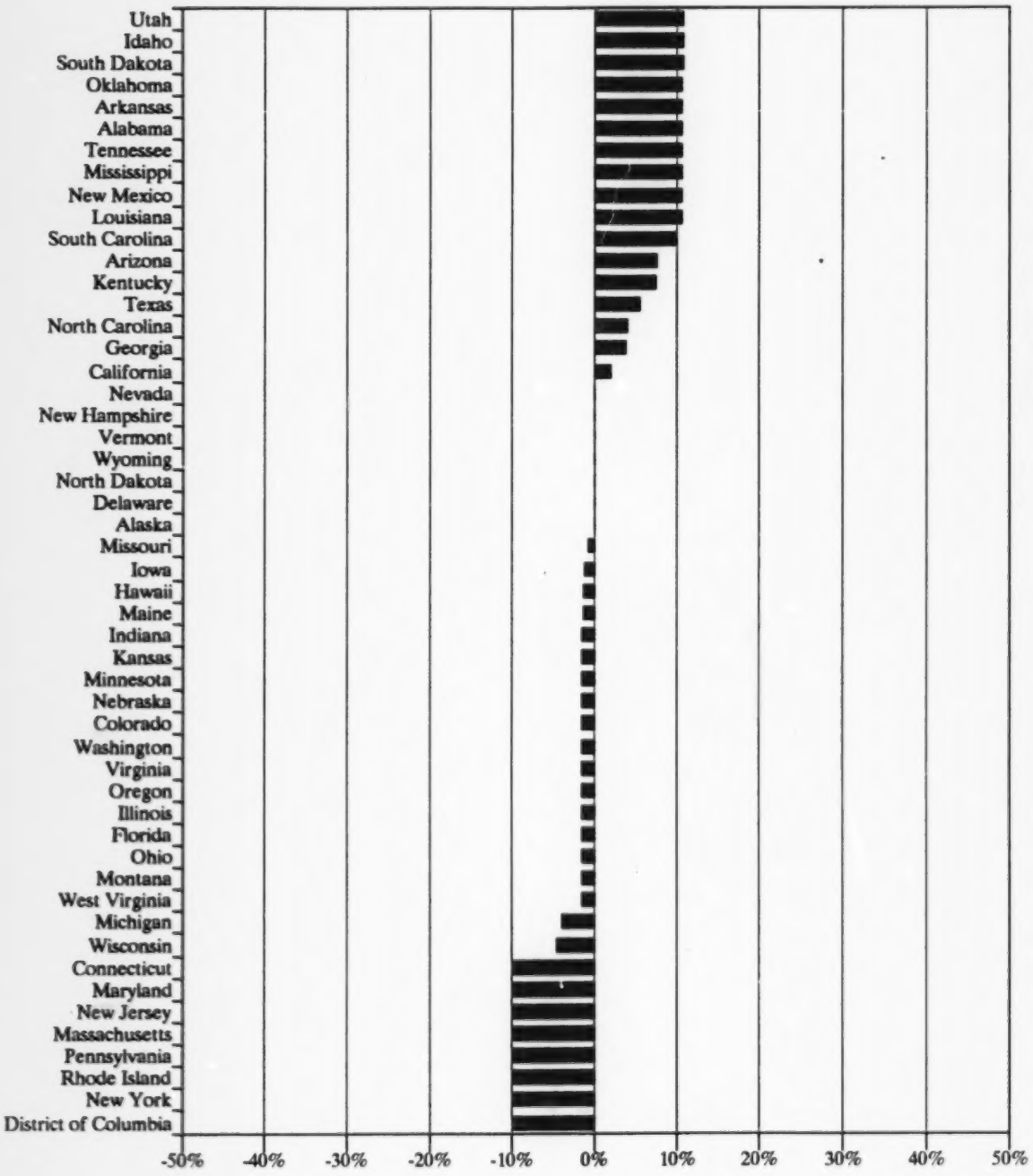
**Rationale.** The current per-pupil expenditure factor is bounded to between 80 percent and 120 percent of the national average in order to control for extreme differences in

expenditures that might more properly be attributed to differences in state fiscal capacity and fiscal effort than to the cost of education. Narrowing the current bounds on the per-pupil expenditure to between 90 percent and 110 percent of the national average would further limit the impact of the cost factor on Chapter 1 allocations. However, the rationale for a range of 90 to 110 percent is not clear. The original 80 to 120 percent bounds were selected to approximate the range of average teacher salaries when the cost adjustment was introduced into the formula (Ginsburg, Noell, and Rosenthal, 1985). Data on average teacher salaries in 1990-91, compiled by the National Education Association, indicate that teacher salaries are still close to these limits, ranging from 68 percent of the national average in South Dakota to 133 percent in Connecticut. Twelve states fall outside the 80 to 120 percent range (9 states are below the range and 3 states above it).

**State-level impact.** Limiting the state per-pupil expenditure factor's bounds to between 90 and 110 percent would move the formula in the same direction as eliminating the expenditure factor while retaining some adjustments for interstate cost differences. Again, this option would produce a geographic pattern of gains in the southern states and losses in the northern states (see exhibits 46 and 50). Specifically in addition to Utah, Idaho, and South Dakota, the major beneficiaries, with gains exceeding 11 percent, would be predominantly in the South (Alabama, Arkansas, Kentucky, Louisiana, Mississippi, New Mexico, Oklahoma, South Carolina, Tennessee). Most of the states that would lose up to 10 percent of their funds are northeastern states such as Connecticut, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island.

## Exhibit 50

## Effects of Limiting the State Per-Pupil Expenditure Factor to Between 90 and 110 Percent of the National Average




**Percentage Change in FY 1993 Allocations**

Exhibit reads: Limiting the state per-pupil expenditure factor to between 90 and 110 percent of the national average per pupil expenditures (instead of the current 80 to 120 percent) would increase funding to 10 states by 11 percent while reducing funding to 8 states by 10 percent.

**County-level impact**. This option would generally shift funds on the 10 counties containing the largest school districts in the same direction as occurs when the cost-of-education factor is eliminated (see exhibit 49). However, the impact under this option would be considerably less dramatic.

## *Option 3: Using a Teacher Salary Index as a Proxy for Interstate Cost Differences*

**Rationale.** A teacher salary index would represent an actual cost, in contrast to the per-pupil expenditure factor, which also captures differences in wealth and willingness to pay for education. Teacher salaries also represent a large share of the outlays for elementary and secondary education making them a logical component of a cost-of-education index. However, a teacher salary index has other problems, including difficulties in factoring out differences in teacher quality, education, and experience. Thus a salary index might still overstate cost differences among states, although to a smaller extent than the per-pupil expenditure factor. Adjusting a teacher salary index for differences in degrees and experience might improve this option, but the federal government does not currently compile annual state-level data on average teacher salaries, and adjusting for teacher training and experience would significantly increase the complexity of this task. Differences in accounting for employee benefits also complicate the production of a nationally uniform teacher salary index.

**State-level impact.** States in which costs are underestimated by the present per-pupil expenditure factor would benefit from this option, while states in which costs are

overestimated by the present expenditure factor would lose funding. Funding reductions of up to 23 percent would occur in 30 states. The states losing the most money are a geographic mix: Maine, Massachusetts, Wisconsin, Oregon, Kansas, West Virginia, and Nebraska, Montana, Louisiana, and Pennsylvania (see exhibits 46 and 51). Sixteen states would gain, most notably California, which would receive a 29 percent increase. In fact, of the $243 million that would shift among states under this option, $198 million — 81 percent — would go to California. Teacher salaries in California reflect the state's high cost of living, but California loses funds under the current cost proxy because its education expenditures are below the national average. Overall, losers would far outnumber gainers, with 15 states losing at least 10 percent and 1 state (Maine) losing over 20 percent. Only 2 states (California and Nevada) would gain 10 percent or more.

**County-level impact**. The impact of this option on the counties containing the largest school districts differs from the impact of the other cost options examined (see exhibit 49). For example, Los Angeles County's allocation would increase by 33 percent under this option, compared with a 9 percent increase under the elimination of the cost-of-education factor and a 2 percent increase under a narrowing of the range of the current cost-of-education factor (state average per-pupil expenditures). Also interesting is the case of Dallas, which would have its allocation decreased by 4 percent under this option and increased between 5 and 13 percent with the other cost adjustment options.

## Exhibit 51

## Effects of Using a Teacher Salary Index to Adjust for Interstate Cost Differences

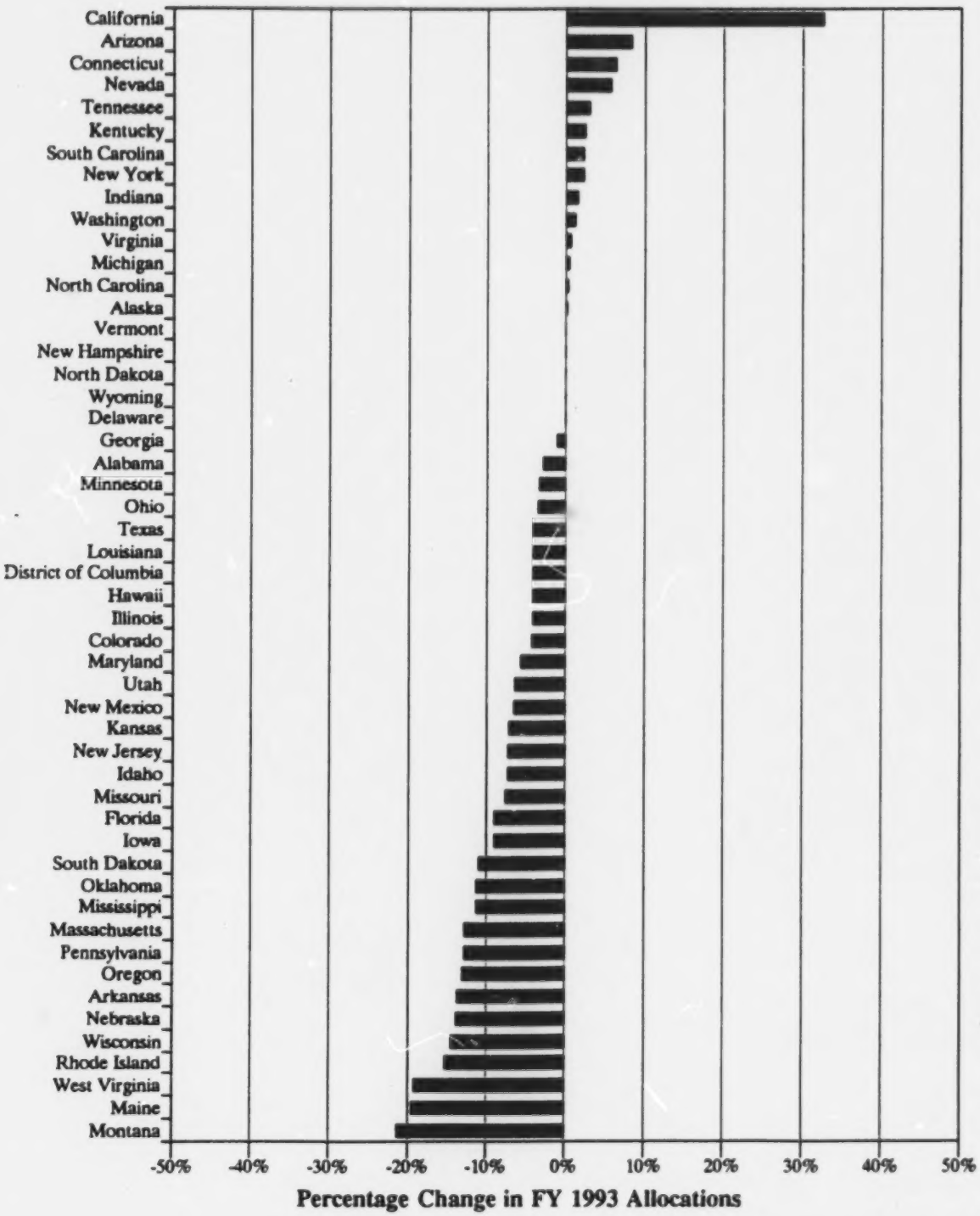



Exhibit reads: Substituting a teacher salary index (based on NEA data) for the state per-pupil expenditure factor would increase funding to California by 33 percent while reducing Montana's funding by 21 percent.

## *Option 4: Using a General Wage Index as a Proxy for Interstate Cost Differences*

**Rationale.** A general wage index would avoid some of the problems associated with using a teacher salary index, such as the difficulty in separating out the effects of differences in teacher quality, education, and experience. A general wage index serves as a reasonable proxy for interstate differences in the cost of living, a major factor affecting the cost of education, but also captures differences in the composition of the labor force and does not reflect factors that influence the salaries of teachers differently from the wages of workers in general. Like the teacher salary index, the general wage index still does not qualify as a true indicator of the cost of education, but it is conceptually closer to a true cost indicator than the current per-pupil expenditure factor.

**State-level impact.** Again, California would be a major winner, although to a smaller extent, receiving $136 million of the $270 million shifted under this option (see exhibits 46 and 52). The only other state that would receive an increase exceeding 10 percent is Texas; others that would gain are Louisiana, the District of Columbia, Tennessee, Georgia, Arizona, Nevada, Oklahoma, and Alabama. Funding losses of 10 percent or more would occur in Montana, Maine, Wisconsin, Oregon, Pennsylvania, Rhode Island, Nebraska, Maryland, Iowa, Kansas, Florida, South Dakota, and Mississippi. The losses are generally larger with this index than with a teacher salary index, and six states would lose 20 percent or more.

## Exhibit 52

### Effects of Using a General Wage Index to Adjust for Interstate Cost Differences

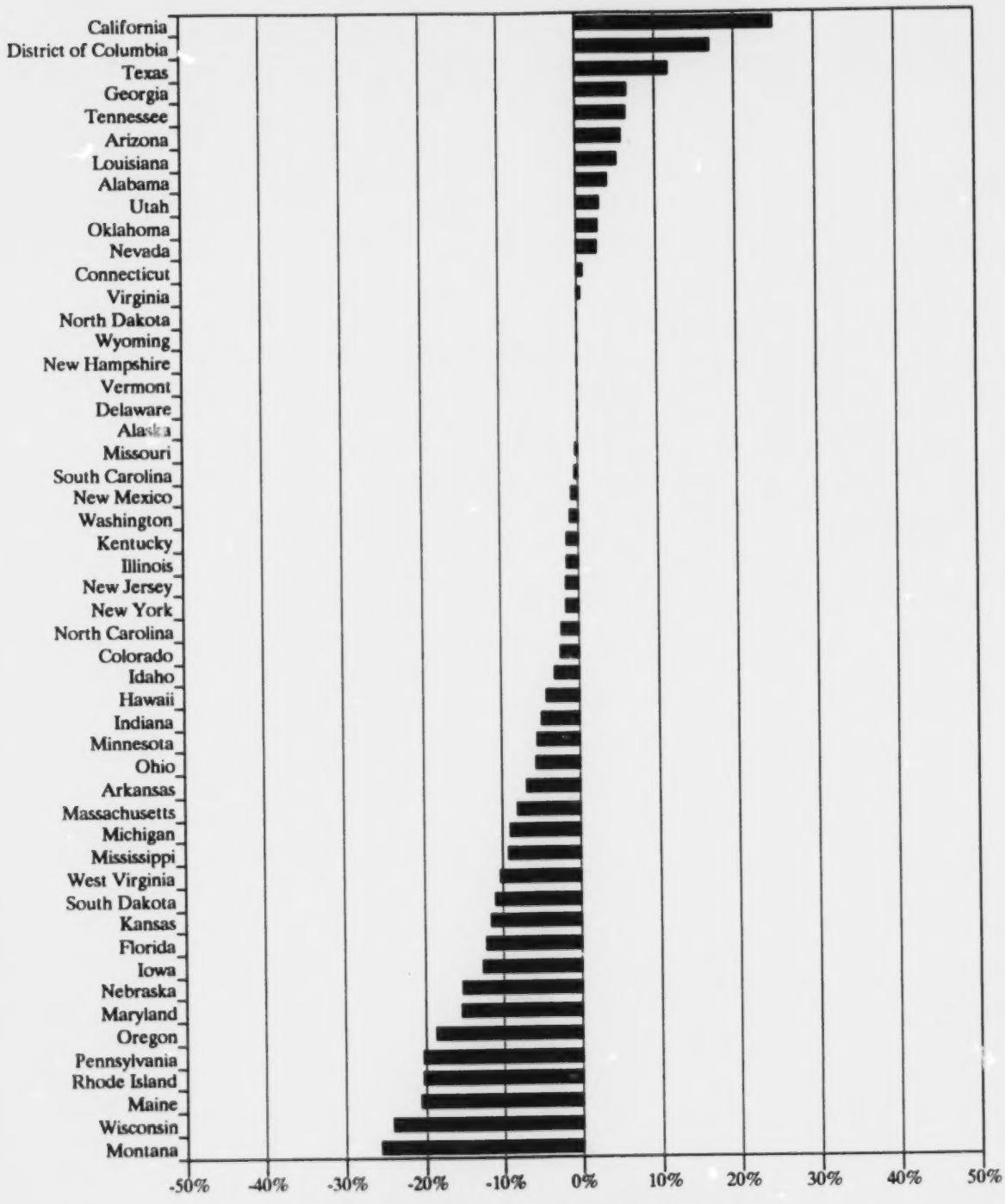



Exhibit reads: Substituting a general wage index for the state per-pupil expenditure factor would increase funding to California by 25 percent while reducing Montana's funding by 26 percent.

**County-level impact.** For 6 out of the 10 largest counties, the redistributive effects of this general wage index are similar to those caused by the teacher salary adjustment; however, these two options also produce significant differences for some large counties (see exhibit 49). Houston and Dallas, both of which would lose 4 percent under the teacher salary index, would gain 12 percent under the general wage index. New York City would gain 2 percent under the teacher salary option but would lose 2 percent under the general wage approach. Los Angeles would still be the biggest gainer and Philadelphia the biggest loser, although the magnitude of the gains and losses is quite different.

## *Conclusion*

The current adjustment for interstate differences in the cost of education is clearly an imperfect cost proxy, but available alternatives have problems of their own. The two alternatives with the clearest logical basis—indexes based on average teacher salaries or private-sector wages—produce the largest shifts and principally benefit California, which is the state treated most unfairly by the current cost proxy. Any change in the Chapter 1 cost adjustment is likely to produce major shifts in the distribution of funds across states, which may explain why the current cost-of-education factor has survived three reauthorizations despite its well-known shortcomings.

# VI

# *Adjustments for Differences in Fiscal Capacity and Fiscal Effort*

Fiscal capacity and fiscal effort are often mentioned as factors warranting consideration in the Chapter 1 formula. An adjustment for state fiscal capacity would distribute Chapter 1 funds inversely to a state's capacity to raise revenues, while an adjustment for state fiscal effort would reward states that spend above average on education relative to their fiscal capacity. This section discusses the rationale for incorporating fiscal capacity and fiscal effort factors into the current Chapter 1 funds, and illustrates the effect of such adjustments, using factors based on state income per pupil.

## *Section Summary*

Proposals for taking fiscal capacity into account in the Chapter 1 formula are motivated by equity concerns: a fiscal capacity adjustment would direct a greater level of federal support to those areas that have a smaller tax base and, therefore, a more limited ability to raise education revenue. Fiscal capacity factors are used in several other major federal programs (e.g., Vocational Education, Aid to Families with Dependent Children, and Medicaid) and are a standard feature of state school funding formulas. Incorporating a fiscal capacity factor based on state per pupil income would redistribute funds away from high-income states, mainly in the Northeast, toward lower-income states, mainly in the South and the West. States with more pupils relative to population would benefit from

the addition of a fiscal capacity factor based on per-pupil income. This option would also increase the targeting of funds to high-poverty counties.

The purpose of incorporating a fiscal effort factor into the Chapter 1 formula would be to encourage increased state and local funding for education. It is not clear that the incremental effect on Chapter 1 allocations would provide a strong enough incentive to affect state and local funding for education. Fiscal effort factors are common in many state school funding formulas that reward school districts that levy higher property tax rates. Ideally, a Chapter 1 fiscal effort factor would use an index of state and local spending for the education of disadvantaged children; however, uniform data on categorical education spending at the state and local level are not available. With a few exceptions, the redistributive effects across county quartiles are small, and the amount a state gains or loses are also small. Utah, for example, which is a major gainer under the fiscal effort adjustment examined would receive an additional $14 million — about 1 percent of its total current expenditures of $1.1 billion in 1989-90 (NCES, 1992).

## *Adjustments for Differences in Fiscal Capacity*

Fiscal capacity varies widely among the states. Several measures of relative state fiscal capacity are available, including per capita income (PCI), the representative tax system (RTS), the representative revenue system (RRS), and total taxable resources (TTR); all of these indicators provide evidence, based on 1988 estimates, of large differences in fiscal capacity among the states and regions. Although the RTS and RRS tend to be more sensitive to changes in capacity than PCI and TTR, the four measures show generally

similar patterns and rankings for the states. Most of the New England and Mideast states had capacity indexes that were above average and were rising relative to the national average between 1986 and 1988. Most of the Far West states (including Alaska and Hawaii) also have above-average fiscal capacity indexes. Energy-producing states such as Texas and Louisiana continued to see their capacities fall substantially between 1986 and 1988; by 1988 many no longer enjoyed the above-average capacities they had in the late 1970s and early 1980s. With some exceptions, the states in the Southeast continued to have the lowest relative capacities, while the Great Lakes, Plains, Southwest, and Rocky Mountain regions fall in the middle ground (Advisory Commission on Intergovernmental Relations, 1990).

If a factor reflecting differences in fiscal capacity were incorporated into the Chapter 1 allocation formula, the distribution of funds would be tilted toward low-capacity states. To the extent that low-capacity states have less adequate educational services, adjusting allocations for differences in fiscal capacity may improve the equity of the Chapter 1 formula.

## *Option for Reform*

### *Option 1: Incorporating Fiscal Capacity Represented by Income Per pupil into the Chapter 1 Formula*

**Rationale.** Two rationales are usually given for incorporating a fiscal capacity factor into the Chapter 1 formula. First, distributing aid in an inverse relationship to fiscal capacity is

virtually universally practiced in state school finance systems, where its explicit purpose is to compensate for disparities in local ability to finance educational services. Second, fiscal capacity plays an important role in distributing federal vocational education funds (and certain grant funds outside education), raising the question of whether the same approach should be used in Chapter 1 (Barro, 1991).

In the current vocational education formula, fiscal capacity is represented by state per-capita income. However, for purposes of distributing Chapter 1 funds there is a strong case for computing fiscal capacity in per-pupil rather than per capita terms. The critical issue for Chapter 1 is how well states can support education services for their elementary and secondary school pupils, not how capable they are of financing public services for their general populations. Although income per capita and income per pupil are correlated, they diverge when states have different proportions of their populations in school. The states seem to assume that per-pupil measures are the appropriate ones to use in distributing education funds to school districts. Measures such as assessed property valuation per pupil appear in virtually all state aid formulas; per capita measures are rarely if ever used.

To illustrate the redistributive effects of adding a fiscal capacity factor into the Chapter 1 formula, we have utilized per-pupil income as the measure of fiscal capacity, with Chapter 1 funds being allocated in inverse proportion to a state's average per-pupil income relative to the national average per-pupil income.

**County-level impact.** This option shifts about 4 percent of Chapter 1 funds from low-poverty counties to high-poverty counties (see exhibit 53).

**Exhibit 53**
**Fiscal Capacity Adjustment**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula | 43% | 26% | 20% | 11% | 19% |
| Fiscal capacity adjustment | 46% | 27% | 17% | 9% | 15% |

Exhibit reads: Adjusting allocations in inverse proportion to state fiscal capacity (using an index of state average per-pupil income relative to the national average) would increase the poorest counties' share of Chapter 1 funds from 43 percent to 46 percent.

However, the counties with the 10 largest school districts, with the exception of Harris and Dallas counties, would have their allocations substantially reduced (see exhibit 54).

**Exhibit 54**
**Options for Alternative Fiscal Capacity and Fiscal Effort Factors**
**Effects on FY 1993 Allocations for the Counties Containing the 10 Largest School Districts**
**(Allocations in thousands of dollars)**

| | | Fiscal Capacity | | Fiscal Effort | |
|---|---|---|---|---|---|
| Counties | Current Formula | Allocation | Change | Allocation | Change |
| New York (NY) | $367,848 | $206,636 | -44% | $319,879 | -13% |
| Los Angeles (CA) | 242,248 | 210,946 | -13% | 230,791 | -5% |
| Cook (IL) | 170,332 | 130,499 | -23% | 132,562 | -22% |
| Dade (FL) | 60,380 | 45,788 | -24% | 52,125 | -14% |
| Philadelphia (PA) | 75,952 | 51,923 | -32% | 63,073 | -17% |
| Harris (TX) | 76,051 | 98,437 | 29% | 92,799 | 22% |
| Wayne (MI) | 104,853 | 85,190 | -19% | 96,244 | -8% |
| Broward (FL) | 19,181 | 14,558 | -24% | 16,564 | -14% |
| Fairfax (VA) | 3,311 | 2,688 | -19% | 3,134 | -5% |
| Dallas (TX) | 41,006 | 53,077 | 29% | 50,037 | 22% |

**State-level impact.** A fiscal capacity factor would generally redistribute funds away from high-income states, mainly in the Northeast, to relatively low-income states in the South (see exhibits 55 and 56). States that gain under this option tend to be low-income states with more pupils relative to population than other states, while states that lose are high-income states that have a relatively low pupil-to-population ratio. High-income states such as Connecticut, Massachusetts, New Jersey, New York, Maryland, Pennsylvania, Florida, and Illinois would lose more than 20 percent. States with relatively low fiscal capacity, such as Utah, Mississippi, Idaho, Louisiana, and New Mexico would see dramatic gains (more than 60 percent). The impact of this option would be roughly opposite to the effect of the current cost factor (state average per-pupil expenditures), since high-income states tend to have higher expenditures as well as higher costs.

## *Adjustments for Differences in Fiscal Effort*

Fiscal effort measures the relationship between fiscal capacity and the amount of revenue raised. A formula containing a fiscal effort component would take into consideration that a wealthy school district might expend considerably less effort than a poor district to raise the same amount of revenue.

The Advisory Commission on Intergovernmental Relations (1990) provides evidence of large variations among states in fiscal effort. The data show no relationship between the states' fiscal capacity and their fiscal effort. For example, Delaware and the District of Columbia have 1988 RTS capacity indexes of 124 and 123, respectively, but Delaware's tax effort index is 84, while the District of Columbia's is 154. Maryland and Utah have

## Exhibit 55
## Adjusting for State Fiscal Capacity
## Effect on the Distribution of FY 1993 Funds Across States
## (Allocations in thousands of dollars)

| States | Current Formula | Fiscal Capacity* | Difference | Percent Change |
|---|---|---|---|---|
| Alabama | $114,719 | $173,226 | $58,506 | 51% |
| Alaska | 11,364 | 11,360 | -4 | 0% |
| Arizona | 91,258 | 110,822 | 19,564 | 21% |
| Arkansas | 68,379 | 109,330 | 40,951 | 60% |
| California | 664,724 | 578,958 | -85,766 | -13% |
| Colorado | 62,334 | 56,410 | -5,924 | -10% |
| Connecticut | 47,114 | 22,200 | -24,913 | -53% |
| Delaware | 12,128 | 12,128 | 0 | 0% |
| District of Columbia | 18,083 | 15,180 | -2,903 | -16% |
| Florida | 269,056 | 204,150 | -64,906 | -24% |
| Georgia | 156,652 | 192,533 | 35,881 | 23% |
| Hawaii | 16,689 | 15,180 | -1,509 | -9% |
| Idaho | 19,851 | 33,756 | 13,905 | 70% |
| Illinois | 283,664 | 217,462 | -66,202 | -23% |
| Indiana | 96,244 | 104,198 | 7,954 | 8% |
| Iowa | 45,180 | 49,872 | 4,692 | 10% |
| Kansas | 45,272 | 46,082 | 810 | 2% |
| Kentucky | 106,263 | 151,489 | 45,226 | 43% |
| Louisiana | 173,254 | 294,253 | 120,999 | 70% |
| Maine | 22,174 | 19,638 | -2,535 | -11% |
| Maryland | 77,405 | 43,889 | -33,516 | -43% |
| Massachusetts | 109,157 | 53,879 | -55,278 | -51% |
| Michigan | 266,081 | 216,319 | -49,762 | -19% |
| Minnesota | 74,623 | 65,418 | -9,205 | -12% |
| Mississippi | 114,058 | 221,404 | 107,346 | 94% |
| Missouri | 108,002 | 113,227 | 5,225 | 5% |
| Montana | 23,514 | 27,999 | 4,485 | 19% |
| Nebraska | 27,211 | 30,907 | 3,696 | 14% |
| Nevada | 16,133 | 14,731 | -1,402 | -9% |
| New Hampshire | 12,838 | 12,838 | 0 | 0% |
| New Jersey | 126,570 | 62,052 | -64,518 | -51% |
| New Mexico | 54,082 | 90,440 | 36,358 | 67% |
| New York | 556,321 | 312,666 | -243,655 | -44% |
| North Carolina | 118,303 | 137,456 | 19,153 | 16% |
| North Dakota | 15,180 | 18,883 | 3,703 | 24% |
| Ohio | 255,370 | 247,953 | -7,417 | -3% |
| Oklahoma | 76,415 | 109,321 | 32,906 | 43% |
| Oregon | 58,099 | 50,277 | -7,822 | -13% |
| Pennsylvania | 275,687 | 188,660 | -87,027 | -32% |
| Rhode Island | 19,022 | 15,180 | -3,842 | -20% |
| South Carolina | 84,348 | 126,434 | 42,086 | 50% |
| South Dakota | 17,038 | 25,390 | 8,352 | 49% |
| Tennessee | 110,730 | 146,805 | 36,075 | 33% |
| Texas | 532,606 | 689,503 | 156,897 | 29% |
| Utah | 29,338 | 62,651 | 33,313 | 114% |
| Vermont | 10,942 | 10,942 | 0 | 0% |
| Virginia | 92,885 | 75,206 | -17,679 | -19% |
| Washington | 84,666 | 76,949 | -7,716 | -9% |
| West Virginia | 60,076 | 83,150 | 23,075 | 38% |
| Wisconsin | 106,997 | 89,341 | -17,656 | -17% |
| Wyoming | 11,527 | 11,527 | 0 | 0% |

*The fiscal capacity indicator was calculated from states' figures for population ages 5-17 and for personal income in the Statistical Abstract of the United States, 1991, Tables 28 and 712 (Washington, D.C.: Department of Commerce, Bureau of the Census).

## Exhibit 56

## Effects of Adjusting for State Fiscal Capacity

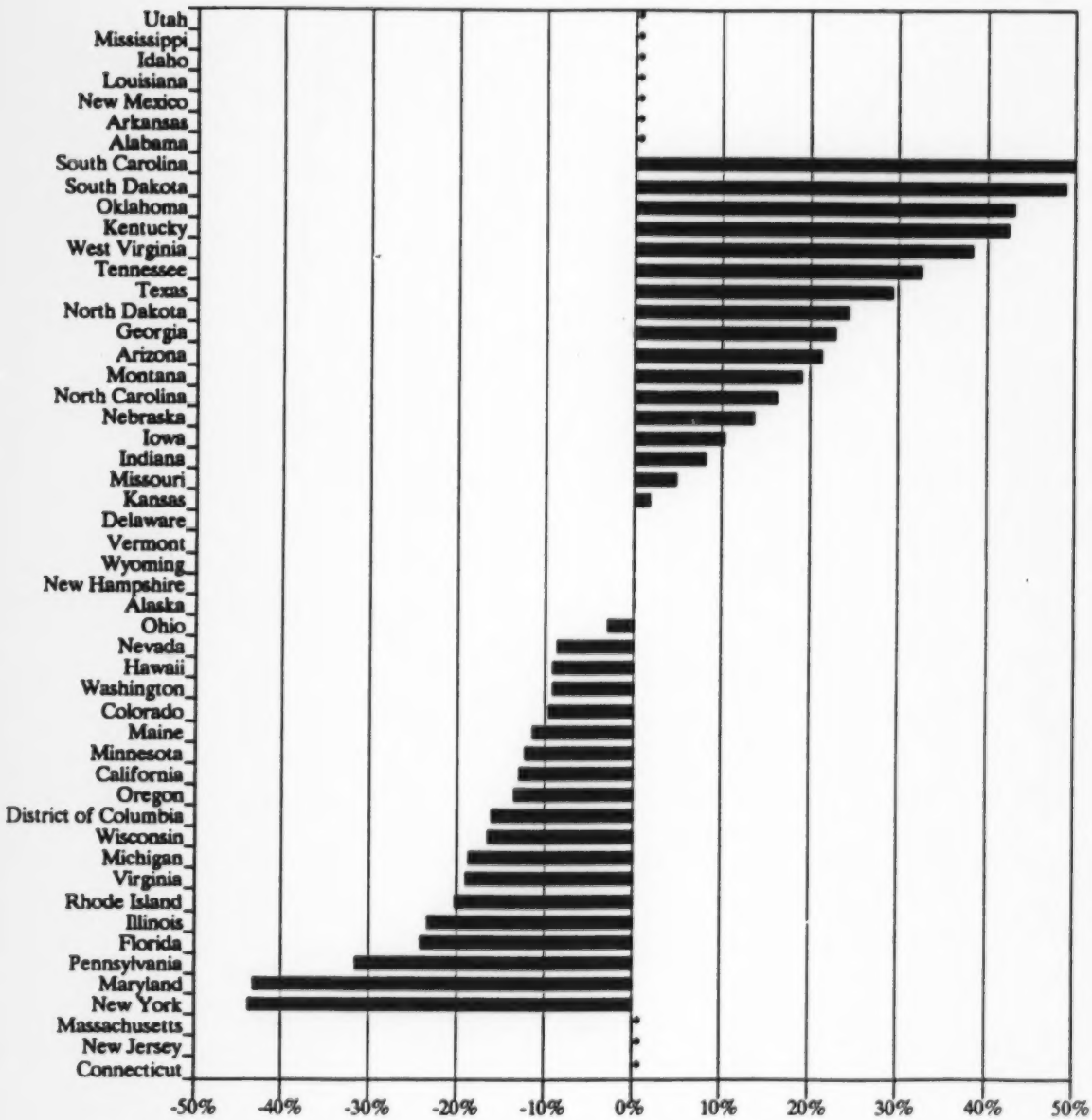



Exhibit reads: Adjusting allocations in inverse proportion to state fiscal capacity (using an index of state average per-pupil income relative to the national average) would increase funding to Utah by 114 percent while reducing Connecticut's funding by 53 percent.

* Value is off the chart: Utah is 114%, Mississippi is 94%, Idaho is 70%, Louisiana is 70%, New Mexico is 67%, Arkansas is 60%, Alabama is 51%, South Carolina is 50%, Massachusetts is -51%, New Jersey is -51%, and Connecticut is -53%.

similar levels of tax effort (108 and 106, respectively), but their capacities are 31 index points apart, at 109 and 78, respectively. States with above-average capacity tend to exhibit more variations in fiscal effort than states with below-average capacity.

Another pattern apparent from the ACIR data is the below-average tax effort of the southeastern states when measured by the RTS. By this measure, all 12 of the states in the region have tax efforts below the national average, and 7 have tax efforts more than 10 percent below average (Advisory Commission on Intergovernmental Relations, 1990).

## *Option for Reform*

### *Option 1: Incorporating an Income-based Fiscal Effort Factor into the Chapter 1 Formula*

**Rationale.** Three rationales are commonly suggested for incorporating an explicit fiscal effort factor into the Chapter 1 aid formula. First, establishing a positive relationship between Chapter 1 aid and state and local fiscal effort creates an incentive for increased state and local funding of educational programs and services of interest to the federal government. Second, linking Chapter 1 aid to fiscal effort (as well as fiscal capacity) can promote equality of fiscal opportunity. Third, because the principle of linking aid to fiscal effort is reflected in the formulas that some states use to distribute education aid to local school districts, the question arises of whether the same principle should not apply in allocating Chapter 1 aid to states.

A state's fiscal effort to support elementary-secondary education is usually defined as the ratio of state and local revenue for elementary and secondary education to state fiscal capacity. Alternative measures of fiscal effort may be generated by inserting different indicators of fiscal capacity indicators into this ratio's denominator. In this simulation, we use per-pupil income as the indicator of fiscal capacity.

**County-level impact.** Adding an income-based fiscal effort factor into the current formula would increase the share of for the highest-poverty counties by only about 1 percent (see exhibit 57). The counties containing the 10 largest school districts, except Dallas, would have smaller allocations under this option (see exhibit 54).

**Exhibit 57**
**Adjusting for State Fiscal Effort**
**Effects on the Distribution of FY 1993 Funds Across Counties**

| | Counties | | | | |
|---|---|---|---|---|---|
| | Highest Poverty Quartile | Second-Highest Poverty Quartile | Second-Lowest Poverty Quartile | Lowest Poverty Quartile | Counties Containing 10 Largest Districts |
| Current formula | 43% | 26% | 20% | 11% | 19% |
| Fiscal effort adjustment | 44% | 27% | 19% | 10% | 17% |

Exhibit reads: Adjusting allocations for state fiscal effort (based on the ratio of state and local revenues for elementary and secondary education to state fiscal capacity) would increase the poorest counties' share of Chapter 1 funds from 43 percent to 44 percent.

**State-level impact.** States that spend above average on education relative to their income level would benefit from inclusion of a fiscal effort factor (see exhibits 58 and 59).

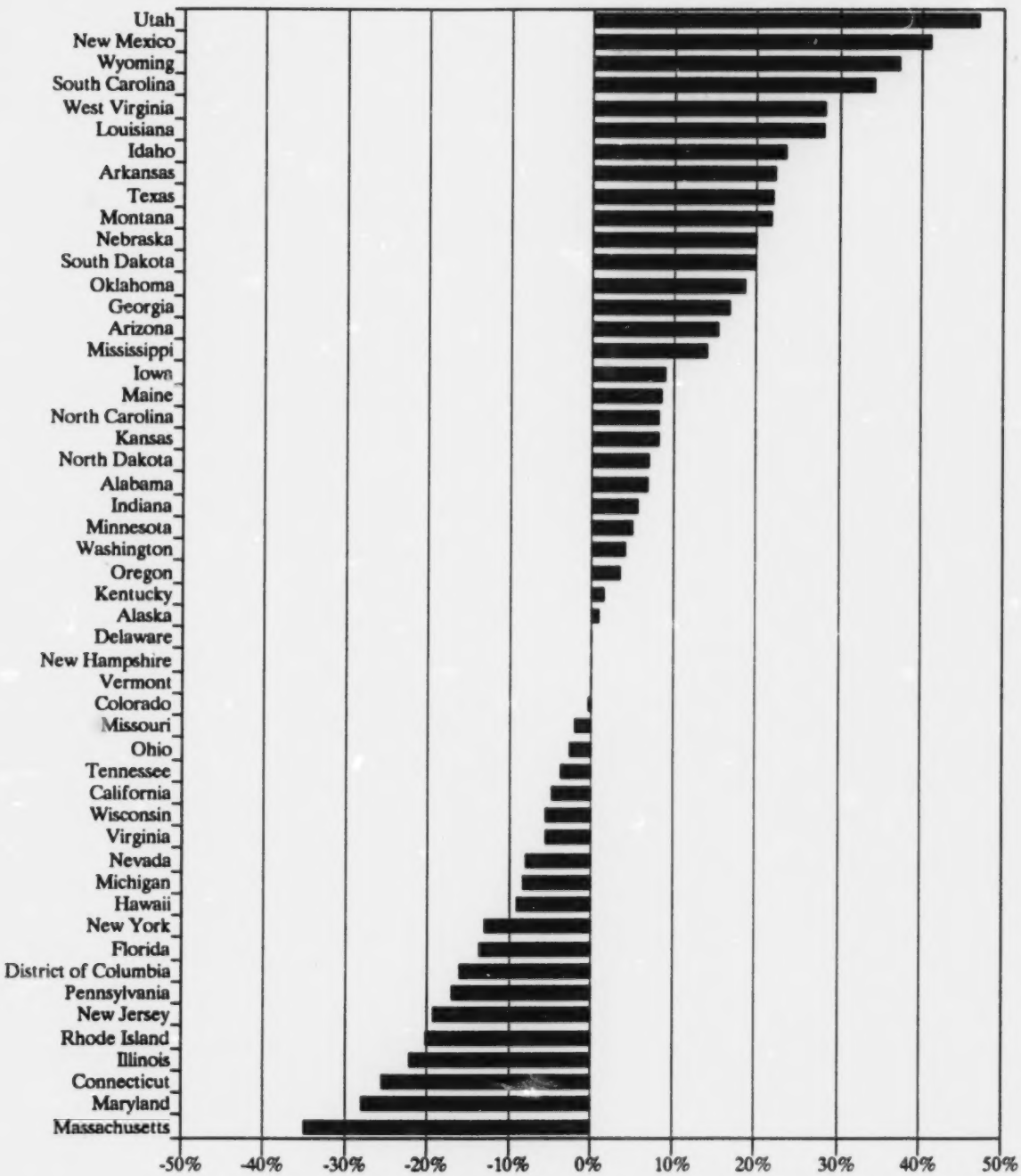
## Exhibit 58
## Adjusting for State Fiscal Effort
## Effect on the Distribution of FY 1993 Funds Among States
## (Allocations in thousands of dollars)

| States | Current Formula | Fiscal Effort* | Difference | Percent Change |
|---|---|---|---|---|
| Alabama | $114,719 | $122,687 | $7,967 | 7% |
| Alaska | 11,364 | 11,470 | 106 | 1% |
| Arizona | 91,258 | 105,277 | 14,019 | 15% |
| Arkansas | 68,379 | 83,576 | 15,197 | 22% |
| California | 664,724 | 633,339 | -31,385 | -5% |
| Colorado | 62,334 | 62,154 | -180 | 0% |
| Connecticut | 47,114 | 35,088 | -12,025 | -26% |
| Delaware | 12,128 | 12,128 | 0 | 0% |
| District of Columbia | 18,083 | 15,180 | -2,903 | -16% |
| Florida | 269,056 | 232,324 | -36,732 | -14% |
| Georgia | 156,652 | 183,072 | 26,420 | 17% |
| Hawaii | 16,689 | 15,180 | -1,509 | -9% |
| Idaho | 19,851 | 24,505 | 4,654 | 23% |
| Illinois | 283,664 | 220,814 | -62,850 | -22% |
| Indiana | 96,244 | 101,624 | 5,380 | 6% |
| Iowa | 45,180 | 49,277 | 4,097 | 9% |
| Kansas | 45,272 | 48,997 | 3,725 | 8% |
| Kentucky | 106,263 | 107,847 | 1,584 | 1% |
| Louisiana | 173,254 | 221,920 | 48,666 | 28% |
| Maine | 22,174 | 24,074 | 1,900 | 9% |
| Maryland | 77,405 | 55,821 | -21,583 | -28% |
| Massachusetts | 109,157 | 71,012 | -38,145 | -35% |
| Michigan | 266,081 | 244,292 | -21,789 | -8% |
| Minnesota | 74,623 | 78,433 | 3,810 | 5% |
| Mississippi | 114,058 | 130,015 | 15,957 | 14% |
| Missouri | 108,002 | 105,826 | -2,176 | -2% |
| Montana | 23,514 | 28,663 | 5,149 | 22% |
| Nebraska | 27,211 | 32,633 | 5,422 | 20% |
| Nevada | 16,133 | 14,844 | -1,289 | -8% |
| New Hampshire | 12,838 | 12,838 | 0 | 0% |
| New Jersey | 126,570 | 102,181 | -24,389 | -19% |
| New Mexico | 54,082 | 76,264 | 22,182 | 41% |
| New York | 556,321 | 483,865 | -72,456 | -13% |
| North Carolina | 118,303 | 128,044 | 9,742 | 8% |
| North Dakota | 15,180 | 16,244 | 1,065 | 7% |
| Ohio | 255,370 | 248,730 | -6,639 | -3% |
| Oklahoma | 76,415 | 90,705 | 14,290 | 19% |
| Oregon | 58,099 | 60,111 | 2,013 | 3% |
| Pennsylvania | 275,687 | 229,024 | -46,663 | -17% |
| Rhode Island | 19,022 | 15,180 | -3,842 | -20% |
| South Carolina | 84,348 | 113,140 | 28,792 | 34% |
| South Dakota | 17,038 | 20,428 | 3,390 | 20% |
| Tennessee | 110,730 | 106,707 | -4,023 | -4% |
| Texas | 532,606 | 649,940 | 117,335 | 22% |
| Utah | 29,338 | 43,126 | 13,788 | 47% |
| Vermont | 10,942 | 10,942 | 0 | 0% |
| Virginia | 92,885 | 87,828 | -5,057 | -5% |
| Washington | 84,666 | 88,155 | 3,489 | 4% |
| West Virginia | 60,076 | 77,089 | 17,013 | 28% |
| Wisconsin | 106,997 | 101,195 | -5,802 | -5% |
| Wyoming | 11,527 | 15,814 | 4,287 | 37% |

*The fiscal effort indicator was calculated using 1988 state and local expenditures on education divided by state average per-pupil income (the fiscal capacity indicator used in exhibit 55). State and local expenditures were obtained from Public Education Finances: 1988-89, Table 149. (Washington, D.C.: Department of Commerce, Bureau of the Census, Series GF-89-10, 1991).

## Exhibit 59

## Effects of Adjusting for State Fiscal Effort




**Percentage Change in FY 1993 Allocations**

Exhibit reads: Adjusting allocations for state fiscal effort (based on the ratio of state and local revenues for elementary and secondary education to state fiscal capacity) would increase funding to Utah by 47 percent while reducing funding to Massachusetts' by 35 percent.

Wyoming, West Virginia, South Carolina, New Mexico, Arizona, Montana, and Oklahoma qualify as high-effort states according to the indicator used here and receive the largest percentage increase in aid (more than 20 percent). Maryland, Illinois, Massachusetts, Pennsylvania, Rhode Island, the District of Columbia, and Connecticut are low-effort states according to this criterion and would lose more than 10 percent.

## *Conclusion*

Fiscal capacity and fiscal effort are commonplace in state educational finance programs, but they have not been widely incorporated in federal grant programs. A fiscal capacity indicator can increase the targeting of resources on high-poverty counties, but a fiscal effort adjustment would have a minimal effect on targeting to high-poverty counties. Both adjustments can significantly shift Chapter 1 resources among the states.

# VII

# Comparability of Resources

To ensure that Chapter 1 funds are used to provide services that are in addition to the regular educational program, Chapter 1 law requires school districts to provide services in Chapter 1 schools that are at least comparable to services in non-Chapter 1 schools before Chapter 1 funds are added.[5] This section examines the availability of school resources within and across school districts and discusses options for narrowing the disparities in the quantity and quality of resources available.

## Section Summary

Federal monitoring visits and studies of within-district comparability (Chambers et al., 1993; U.S. General Accounting Office, 1993a) have found few violations of current comparability requirements. Wide disparities in the quantity and quality of education resources across districts, however, have aroused considerable concern, particularly when high-poverty schools are located in low-revenue districts. If Chapter 1 funds are added to an unequal base of state and local resources across school districts, the program may have a limited capacity to close the achievement gap between high- and low-poverty schools.

[5]Comparability is one of three Chapter 1 fiscal requirements for LEAs. Chapter 1 also requires participating LEAs to maintain effort and to use Chapter 1 funds to supplement, not supplant state and local resources for education.

To assure that Chapter 1 funds supplement an equal base of state and local funding in each district, several groups have suggested conditioning Chapter 1 funding on equalization of state school funding systems. Such a requirement could be defined in terms of traditional measures of fiscal equity or in terms of service delivery standards that would define comparability more broadly by assessing the equity of vital educational services among schools. There is no consensus on absolute standards, either for fiscal equity or school delivery, below which states would be deemed inequitable. Penalizing non-compliant states could harm the same children who are most hurt by funding inequities. $6.7 billion in Chapter 1 funds may also be an inadequate "stick" for forcing equalization of a $250 billion school system.

Alternatively, the federal government could work to set clear, specific standards for both fiscal equity and service delivery. Existing fiscal equity measures are relative, not absolute; they permit comparisons across states or over time but do not tell whether a state has achieved "equity." Service delivery standards, also known as "opportunity-to-learn standards", have been discussed extensively but not yet clearly defined; the task remains to develop meaningful standards that assess whether all children have similar access to challenging content, high quality instruction, and essential supporting resources but do not impose an unduly burdensome new set of reporting requirements for the nation's 80,000 schools. Once agreement on a well-defined set of standards is achieved, the federal government could encourage states to adopt the standards and assist with implementation issues.

Finally, the federal government could support and disseminate research on equity within each of the states, using available indicators of fiscal equity and service quality, in order to determine where inequities are most severe and where states are making significant progress. Publicizing information on the relative standing of each state on fiscal equity could focus public attention on the states with the greatest need for reform.

## *Evidence on Comparability Within and Across School Districts*

Under current comparability regulations, school districts may demonstrate compliance through a districtwide salary schedule and policies to assure equivalence among schools in teachers, other staff, curriculum materials, and instructional supplies, or comparable ratios of students to instructional staff or comparable levels of spending per student on instructional staff salaries. Most school districts use student-staff ratios to show compliance.

Some observers question whether these requirements assure that Chapter 1 is truly supplementary. One concern is that the current comparability standards may not provide an adequate guarantee of equity among schools within the same district; for example, schools with comparable staffing ratios could have large differences in the quality of their teachers or unequal supplies of textbooks and computers. Broader concerns relate to disparities in the funds available to school districts from state and local sources. Because current comparability requirements focus on resource distribution within school districts, they do not protect Chapter 1 students in low-revenue districts from receiving a basic

educational program that is inferior to the program provided to students in high-revenue districts. Where state school funding systems are inequitable, Chapter 1 may simply buy services and resources in poor districts that are routinely provided to all students through regular funds in wealthy districts (Taylor & Piche, 1990).

Federal monitoring visits and studies of comparability within districts indicate that school districts appear to be complying with current comparability requirements. Even where studies have examined a broader set of measures than those contained in the regulations (Chambers et al., 1993; U.S. General Accounting Office, 1993a), Chapter 1 schools and non-Chapter 1 schools appear to have similar levels of most kinds of resources. Although two recent comparability studies examined limited samples of school districts that were not nationally representative (Chambers et al. visited 30 districts and GAO visited 8 districts), their findings were generally consistent. In terms of student-staff ratios for specific types of staff, the Chapter 1 schools visited were, on average, better off than the non-Chapter 1 schools. The Chapter 1 schools fared less well on commonly used indicators of teacher quality, such as teachers' average years of experience or the percent of teachers with master's degrees, but the differences were not striking; for example, Chambers et al. found that teachers in the Chapter 1 schools averaged 14.4 years of experience and those in the non-Chapter 1 schools averaged 15.7 years. For equipment and instructional materials, the Chapter 1 schools had less of some kinds of resources but more of others; again, most differences were not large.

Across districts, however, a large body of research and litigation has documented inequities in the resources available in rich schools and poor schools. In one of the latest contributions to this literature, Jonathan Kozol's book Savage Inequalities (1991) contrasted the crowded classrooms, out-of-date and underequipped science labs, and insufficient numbers of textbooks he found in some high-poverty school districts with the small class sizes, state-of-the art computer equipment, and highly-paid teachers he observed in some very wealthy districts. Disparities in educational resources have fueled numerous school finance lawsuits, but extensive school finance litigation over the past two decades has not resolved the equity debate and litigation is now pending in roughly half of the states.

Most evidence on funding inequities and the inadequate resources available to high-poverty schools is either anecdotal or specific to certain states. This section takes a more systematic approach to assessing equity, examining district funding and specific school-level resources among high- and low-poverty districts and schools across the nation. It also examines differences in school resources in high- and low-revenue districts in order to see how differences in district funding translate into differences in the resources and services available at the school site.

At the district level, examination of national data does not support the widely held impression that most states systematically discriminate against poor children by providing fewer educational resources to high-poverty districts and schools. In fact, high-poverty districts had, on average, higher expenditures per pupil than low-poverty districts in 33

states in 1984-85, the latest year studied (Schwartz and Moskowitz, 1988). Several factors may explain this finding. Although district revenues are sometimes highly variable and dependent on local tax capacity, local revenue-raising ability is determined by industrial and commercial property as well as by personal incomes, particularly in some central cities, where high poverty rates coincide with a large commercial tax base. Furthermore, most states use school funding formulas that direct a greater level of state support to property-poor school districts, thus weakening the link between local wealth and district revenues. High-poverty districts also tend to receive higher levels of support through categorical programs, including Chapter 1 and, in many states, state compensatory programs.

At the school level, common measures of comparability reveal few differences among high- and low-poverty schools, yet more subjective measures suggest that significant differences do in fact exist. According to data from the nationally representative Schools and Staffing Survey (NCES, 1988), high-poverty schools (over 75 percent poor) fared at least as well as, if not better than, low-poverty schools on four staffing measures: student-teacher ratios, student-staff ratios, percent of teachers with advanced degrees, and percent of teachers with less than three years of experience (see exhibit 60). Nevertheless, administrators in high-poverty schools were twice as likely to express difficulty in finding qualified applicants for teaching positions. Similarly, a Harris Poll found that new teachers in high-poverty schools were less likely to report that working with their principals and colleagues was very satisfying than were their counterparts in low-poverty schools, and only 25 percent of new teachers in high-poverty schools believed that

**Exhibit 60**
**Staffing in Low- and High-Poverty Schools**

| | Level of School Poverty | |
|---|---|---|
| | 0-19% | 75%-100% |
| Number of students per classroom teacher | 19 | 18 |
| Number of students per instructional staff person | 10 | 10 |
| Percent of teachers with degree above bachelor's | 41 | 41 |
| Percent of classroom teachers with less than 3 years' teaching experience | 15 | 10 |
| Percent of school administrators saying that it is generally difficult to find qualified applicants for teaching positions | 15 | 30 |

Source: Westat, Inc. (1993), unpublished tabulations from the NCES Schools and Staffing Survey, 1987-88.

students receive an excellent education at their schools, compared to 55 percent in low-poverty schools (Harris, 1992).

These findings suggest the need to take a closer look at how school-level resources differ in quality as well as quantity. As part of the National Assessment of Chapter 1, researchers visited 95 elementary schools in 5 states to examine differences in a wide variety of resources among high- and low-poverty schools in high- and low-revenue districts (Chambers et al., 1993). Because these schools were purposively sampled, these findings are not conclusive or nationally representative; however, they do allow detailed comparisons of a wide variety of school-level resources and may suggest testable hypotheses about the types and magnitudes of differences among these schools.

In this study, high-poverty schools (over 50 percent poor) and low-poverty schools (less than 20 percent poor) averaged the same level of funding per pupil, and the slight differences in many common comparability measures (student-teacher ratios, teacher

salaries, and teacher experience) favored the high-poverty schools (see exhibit 61). However, the high-poverty schools appeared substantially worse off on a number of quality indicators that are less tangible and more difficult to measure objectively: fewer principals gave their teachers high ratings, staff morale appeared lower, building conditions received low ratings by site visitors in 25 percent of the buildings (compared with only 2 percent in the low-poverty schools), and less than half of the teachers said that they would want their own child to attend the school (compared with 94 percent of the teachers in the low-poverty schools). The high-poverty schools also had fewer computers (31 in a typical school of 500 students, compared with 37 computers in a low-poverty school of the same size); this disparity may partly reflect higher spending on staffing in the high-poverty schools and the receipt of more donated equipment from parent-teacher associations in the low-poverty schools.

Comparisons by level of district revenue found that the schools in low-revenue districts fared substantially worse on many comparability measures: their student-teacher ratios were higher; their teachers had less experience, fewer advanced degrees, lower salaries, and lower principal ratings; teacher turnover was higher; they had less equipment (e.g., 25 computers versus 39 computers in a school of 500 students); and their facilities were less spacious and received lower ratings by site visitors.

Interestingly, the differences in intangible factors that were particularly noticeable in the high- and low-poverty schools generally were less noticeable in the schools in low- and high-revenue districts. There was no difference by district revenue in the percent of teachers

## Exhibit 61
## Elementary School Characteristics and Resources by School Poverty and District Revenue Levels

| | High-Poverty Schools | Low-Poverty Schools | Schools in Low-Revenue Districts | Schools in High-Revenue Districts |
|---|---|---|---|---|
| Number of schools in sample | 24 | 39 | 35 | 33 |
| District revenue per pupil (cost-adjusted) | $5,296 | $5,318 | $4,025 | $6,725 |
| Student characteristics | | | | |
| % eligible for free/reduced-price lunch | 75% | 10% | 37% | 34% |
| % Chapter 1 participants | 42% | 3% | 19% | 18% |
| Average percentile rank on achievement tests | 43% | 75% | 58% | 70% |
| Problem rated as moderate to serious by principal | | | | |
| Student mobility | 79% | 12% | 51% | 39% |
| Student health | 45% | 7% | 25% | 15% |
| Student drug/alcohol abuse | 16% | 2% | 11% | 3% |
| Student violence | 20% | 2% | 17% | 3% |
| Number of students per classroom teacher | 25.1 | 25.9 | 25.1 | 24.5 |
| Staff characteristics | | | | |
| Average teacher salary index (cost-adjusted) | .98 | .97 | .89 | 1.03 |
| Years of experience | 14.2 | 15.0 | 12.7 | 15.8 |
| % with master's degree | 36% | 46% | 40% | 56% |
| % with standard teaching certificate | 89% | 92% | 90% | 90% |
| % of principals reporting that teachers are "much above the district average" | 66% | 89% | 71% | 90% |
| Staff morale | | | | |
| % teacher turnover | 8% | 5% | 10% | 4% |
| % who would again choose teaching career | 74% | 88% | 82% | 84% |
| Equipment | | | | |
| Number of computers per 500 students | 30.7 | 37.2 | 24.5 | 38.5 |
| Average value of equipment per student | $196 | $221 | $184 | $215 |
| School facilities | | | | |
| Total square feet per student | 106 | 96 | 79 | 111 |
| Instructional space: square feet per student | 48 | 50 | 46 | 48 |
| % of buildings rated in fair/poor condition | 25% | 2% | 20% | 9% |
| % of classrooms rated in fair/poor condition | 4% | 0% | 2% | 9% |
| % of restrooms rated in fair/poor condition | 29% | 2% | 17% | 12% |
| % of teachers who say they would want their child to attend the school where they teach | 47% | 94% | 76% | 77% |

Source: Chambers et al. (1993). Translating Dollars into Services: Chapter 1 Resources in the Context of State and Local Resources for Education. Data are based on a purposive sample of 95 elementary schools in 5 states.



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who said they would want their child to attend the school where they teach, and differences by poverty were more striking than differences by revenue for such indicators as principal ratings of teachers, the percent of teachers who would again choose a career in teaching, and site visitor ratings of building conditions. Although further study on a nationally representative sample of schools is needed to draw firm conclusions, these findings suggest that comparable levels of resources may not enable high-poverty schools to overcome the special problems they face.

Resource availability is affected not only by differences in district funding levels but also by differences in the ways that districts use their resources. Although few differences in staffing levels have been found in high- and low-poverty schools, the Prospects study (Abt Associates Inc., 1993) found that teachers in high-poverty schools were much less likely to report adequate amounts of basic inexpensive materials such as pencils and paper. Case studies of several large urban districts that have large concentrations of high-poverty schools have concluded that a surprisingly low percent of total district revenue ever makes it to the classroom to support instruction. In one district, Fischer (1990) estimated that only 56 percent of the total budget went for instructional costs. In another study of eight school districts, Cooper and Sarrel (1993) found that instructional expenditures ranged from 58 percent to 64 percent of total per-pupil expenditures. Raising the share of funding spent on direct instruction could improve educational effectiveness without raising costs.

## *Options for Reform*

Should the Chapter 1 program require or attempt to promote a more equitable distribution of state and local funds across school districts? The federal Impact Aid program sets some precedent for this, by allowing states that pass an equalization test to use Impact Aid funds to supplant state funding to schools; however, the Impact Aid model is not necessarily appropriate for Chapter 1, which is intended to supplement, not supplant, the resources of high-poverty schools.

Alternatives for the Chapter 1 program include:

1. Making Chapter 1 funding contingent upon equalization of the state school funding system,
2. Developing standards for measuring the comparability of students' opportunities to learn, and
3. Publicizing data on the equity of state school funding systems.

### *Option 1: Making Chapter 1 Funding Contingent upon Equalization of the State School Funding System*

**Rationale.** Proposals for an equalization requirement in Chapter 1 are intended to assure that Chapter 1 funds supplement a base of state and local resources that are distributed equitably across school districts within each state. Equalization standards could be defined in terms of traditional fiscal equity measures or in terms of service delivery standards that would define comparability more broadly by assessing the equity of vital educational services among schools. Taking service quality into consideration could

move the comparability requirement closer to the underlying objective of equalizing learning opportunities across schools (O'Day & Smith, in press).

The danger of this approach is that it has the potential to harm poor children if unequalized states choose to give up Chapter 1 funds rather than undertake politically difficult equity reforms. Chapter 1 might prove an ineffective "stick" for forcing equalization on states; it provides less than 3 percent of total funding for public schools, and the state legislators whose districts would lose the most in Chapter 1 funding are frequently not the same as those who have the most to lose from equalization. Moreover, the political difficulty of equalization should not be underestimated; New Jersey voters responded to a state tax increase earmarked for additional funding for the poorest districts (as mandated by the court) by voting the Democratic majority in the state legislature out of office. If an equalization requirement were unsuccessful in forcing equity reforms, it could end up reducing resources for disadvantaged students.

Furthermore, there is no consensus on absolute equity standards below which states would be deemed inequitable. Service delivery standards, or opportunity-to-learn standards, have been extensively discussed in principle, but specific standards remain to be developed. Existing fiscal equity measures permit comparisons among states or over time but do not tell whether a state has achieved "equity," and different measures often provide widely divergent assessments of a state's equity. The federal Impact Aid program does contain a set of equity standards, but outside the Impact Aid program these have been more widely used as measures than as standards; moreover, because only six

states have been approved as "equalized" states under the program, use of these standards could result in the majority of states becoming ineligible for Chapter 1 funds.

An alternative with less drastic consequences would be to incorporate an equalization incentive into the Chapter 1 formula. Such a factor could promote equalization by providing a higher level of funding per child depending on the degree of equalization in the state. The question remains, however, whether the amount of funds involved could provide a sufficient incentive to affect state legislators' votes on school funding decisions.

## *Option 2: Developing Standards for Measuring the Comparability of Students' Opportunity to Learn*

**Rationale.** Current comparability standards that measure equity in terms of per-pupil expenditures and teacher-student ratios may be missing factors that are critical to student success. If Chapter 1 students are expected to achieve the same high academic standards as other students, they need not only equal resources but also similar access to challenging content and high quality instruction. Some education researchers (O'Day & Smith, in press), working on broader issues of systemic reform, have suggested extending the concept of comparability to include the quality of educational services.

Opportunity-to-learn standards would assess the extent to which all children have similar access to the education resources and services that support student achievement of high academic standards. Potential areas for standard setting include teacher competency in content areas; professional development programs; appropriate class sizes; adequate

quantities of up-to-date textbooks and other instructional materials; and adequate facilities and up-to-date equipment, including laboratories and computers. To be most effective at assuring that students have equal opportunities to learn, resource standards would be tied to curriculum frameworks that include standards for acquisition of competencies in basic subjects and new assessment methods that measure what students know and can do in relation to the curriculum standards.

The difficulty is developing standards that are measurable and meaningful yet sufficiently flexible. For example, high teacher quality is clearly a key to equality of educational opportunity, yet the teacher characteristics that are easiest to measure may be inadequate proxies for teacher quality. As noted above, common measures such as degree attainment, experience, and salary level appear at odds with more subjective but perhaps more telling indicators, such as principal and peer ratings. Furthermore, for specialized resources such as science laboratories, the appropriate quantity may depend on the school's focus; a science and technology magnet school, for instance, may need different types and quantities of equipment than a school that emphasizes foreign languages.

## *Option 3: Publicizing Data on the Equity of State School Funding Systems*

**Rationale.** States vary widely in the extent to which funds are distributed equitably among school districts. Some states exhibit small variations in funding levels across districts, a low correlation between spending and local wealth and income, and a positive

correlation between spending and poverty that suggests the state is targeting additional funds to places with greater needs. At the other extreme are states that exhibit large variations in funding levels related to local wealth, with high-poverty districts receiving below-average funding levels.

The federal government could focus public attention on the states with the greatest need for reform by publicizing information on the relative standing of each state on fiscal equity. Most previous equity research has focused on individual states, and few studies have applied equity measures uniformly to all states. The federal government could encourage states to improve the equity of their school finance systems by supporting and disseminating research on state equalization levels and recent progress in improving equity.

## *Conclusion*

Although available evidence indicates that comparability exists within districts, there are wide disparities in resource levels across districts. The Chapter 1 comparability requirement could be extended to require comparability of services across districts within a state, but the relatively small percentage of funds provided by Chapter 1 may not provide a strong enough incentive to states to undertake major and politically explosive school finance reforms, potentially resulting in the cutoff of Chapter 1 services to needy students in non-compliant states. To address concerns that current comparability measures may not adequately assess whether all students have equivalent opportunities to learn, the federal government could support the development of service delivery

standards that would broaden the concept of comparability to include the quality of education services. Finally, because states vary widely in the equitability of their school funding systems, the federal government could support and disseminate research on school finance equity in order to help focus public attention on the states with the greatest need for reform.

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# APPENDIX A

## Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the 10 Counties with the Highest Concentrations of Poor Children

## APPENDIX A

### Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the 10 Counties with the Highest Concentrations of Poor Children

| | East Carroll County (LA) | Shannon County (SD) | Starr County (TX) | Tunica County (MS) | Holmes County (MS) |
|---|---|---|---|---|---|
| County poverty rate | 70% | 69% | 68% | 68% | 66% |
| Current formula | $639 | $639 | $670 | $639 | $639 |
| FORMULA ALTERNATIVES | | | | | |
| Raise Concentration Grant share to: | | | | | |
| 20% | $654 | $654 | $686 | $654 | $654 |
| 30% | $670 | $670 | $704 | $670 | $670 |
| 50% | $706 | $706 | $741 | $706 | $706 |
| 75% | $748 | $748 | $786 | $748 | $748 |
| Raise Concentration Grant threshold to: | | | | | |
| 18% threshold | $649 | $653 | $681 | $649 | $649 |
| 25% threshold | $673 | $680 | $706 | $673 | $673 |
| Raise Concentration Grant threshold and share: | | | | | |
| 18% threshold, 50% share | $756 | $760 | $793 | $756 | $756 |
| 25% threshold, 35% share | $795 | $802 | $835 | $795 | $795 |
| Consistent treatment of percentage and number thresholds for Concentration Grants | | | | | |
| Count all students in eligible counties | $634 | $634 | $665 | $634 | $634 |
| Count only students over thresholds | $657 | $663 | $689 | $656 | $655 |
| Absorption formula with: | | | | | |
| 2% threshold | $702 | $702 | $737 | $702 | $702 |
| 4% threshold | $804 | $804 | $844 | $804 | $804 |
| 6% threshold | $935 | $935 | $982 | $935 | $935 |
| Weighted-pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | $747 | $747 | $785 | $747 | $747 |
| 10% threshold/½ pupil weight | $847 | $847 | $889 | $847 | $847 |
| 16% threshold/½ pupil weight | $1,001 | $1,001 | $1,050 | $1,001 | $1,001 |
| 18% threshold/½ pupil weight | $1,045 | $1,045 | $1,097 | $1,045 | $1,045 |
| Adjusted enrollment | $727 | $727 | $763 | $727 | $727 |
| Free school lunch counts | $440 | $440 | $462 | $440 | $440 |
| Elimination of cost of education factor | $758 | $758 | $758 | $758 | $758 |
| Current cost factor with 90%-110% bounds | $707 | $707 | $707 | $707 | $707 |
| Teacher salary index | $612 | $562 | $643 | $567 | $567 |
| General private-sector wage index | $693 | $562 | $762 | $577 | $577 |
| Fiscal capacity adjustment | $1,084 | $951 | $868 | $1,239 | $1,239 |
| Fiscal effort adjustment | $818 | $765 | $818 | $728 | $728 |

(continued)

## APPENDIX A (Continued)

## Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the 10 Counties with the Highest Concentrations of Poor Children

| | Owsley County (KY) | Issaquena County (MS) | McPherson County (NE) | Menominee County (WI) | Lee County (AR) |
|---|---|---|---|---|---|
| County poverty rate | 64% | 63% | 63% | 62% | 61% |
| Current formula | $658 | $639 | $720 | $905 | $639 |
| FORMULA ALTERNATIVES | | | | | |
| Raise Concentration Grant share to: | | | | | |
| 20% | $674 | $654 | $737 | $926 | $654 |
| 30% | $691 | $670 | $756 | $950 | $670 |
| 50% | $728 | $706 | $796 | $1,001 | $706 |
| 75% | $771 | $748 | $844 | $1,061 | $748 |
| Raise Concentration Grant threshold to: | | | | | |
| 18% threshold | $669 | $649 | $737 | $919 | $649 |
| 25% threshold | $694 | $673 | $767 | $954 | $673 |
| Raise Concentration Grant threshold and share: | | | | | |
| 18% threshold, 50% share | $779 | $756 | $857 | $1,071 | $756 |
| 25% threshold, 35% share | $820 | $795 | $904 | $1,127 | $795 |
| Consistent treatment of percentage and number thresholds for Concentration Grants | | | | | |
| Count all students in eligible counties | $653 | $634 | $715 | $898 | $634 |
| Count only students over thresholds | $674 | $654 | $743 | $927 | $653 |
| Absorption formula with: | | | | | |
| 2% threshold | $723 | $702 | $791 | $995 | $702 |
| 4% threshold | $829 | $804 | $907 | $1,140 | $804 |
| 6% threshold | $964 | $935 | $1,055 | $1,326 | $935 |
| Weighted-pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | $770 | $747 | $843 | $1,059 | $747 |
| 10% threshold/½ pupil weight | $873 | $847 | $955 | $1,201 | $847 |
| 16% threshold/½ pupil weight | $1,031 | $1,001 | $1,128 | $1,418 | $1,001 |
| 18% threshold/½ pupil weight | $1,077 | $1,045 | $1,178 | $1,481 | $1,045 |
| Adjusted enrollment | $749 | $727 | $819 | $1,030 | $727 |
| Free school lunch counts | $453 | $440 | $496 | $624 | $440 |
| Elimination of cost of education factor | $758 | $758 | $758 | $758 | $758 |
| Current cost factor with 90%-110% bounds | $707 | $707 | $708 | $864 | $707 |
| Teacher salary index | $674 | $567 | $620 | $773 | $551 |
| General private sector wage index | $647 | $577 | $593 | $678 | $593 |
| Fiscal capacity adjustment | $938 | $1239 | $817 | $754 | $1021 |
| Fiscal effort adjustment | $668 | $728 | $863 | $855 | $780 |

# APPENDIX B

## Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the Counties Containing the 10 Largest School Districts

## APPENDIX B

### Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the Counties Containing the 10 Largest School Districts

| | New York City (NY) | Los Angeles County (LA) | Cook County (IL) | Dade County (FL) | Philadelphia County (PA) |
|---|---|---|---|---|---|
| County poverty rate | 30% | 21% | 22% | 24% | 29% |
| Current formula | $958 | $693 | $839 | $782 | $958 |
| FORMULA ALTERNATIVES | | | | | |
| Raise Concentration Grant share to: | | | | | |
| 20% | $980 | $709 | $859 | $801 | $980 |
| 30% | $1,006 | $728 | $881 | $821 | $1,006 |
| 50% | $1,059 | $766 | $927 | $865 | $1,059 |
| 75% | $1,123 | $812 | $983 | $917 | $1,123 |
| Raise Concentration Grant threshold to: | | | | | |
| 18% threshold | $971 | $704 | $852 | $795 | $973 |
| 25% threshold | $1,003 | $728 | $879 | $812 | $1,010 |
| Raise Concentration Grant threshold and share to: | | | | | |
| 18% threshold, 50% share | $1,122 | $820 | $993 | $926 | $1,134 |
| 25% threshold, 35% share | $1,173 | $855 | $1,028 | $933 | $1,193 |
| Apply consistent treatment of percentage and number thresholds for Concentration Grants: | | | | | |
| Count all students in eligible counties | $951 | $688 | $833 | $776 | $951 |
| Count only students over thresholds | $1,011 | $741 | $895 | $826 | $1,012 |
| Absorption formula with: | | | | | |
| 2% threshold | $1,053 | $762 | $922 | $860 | $1,053 |
| 4% threshold | $1,206 | $873 | $1,056 | $985 | $1,206 |
| 6% threshold | $1,403 | $1,015 | $1,229 | $1,146 | $1,403 |
| Weighted-pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | $1,121 | $811 | $982 | $916 | $1,121 |
| 10% threshold/½ pupil weight | $1,271 | $919 | $1,113 | $1,038 | $1,271 |
| 16% threshold/½ pupil weight | $1,501 | $1,086 | $1,315 | $1,226 | $1,501 |
| 18% threshold/½ pupil weight | $1,568 | $1,135 | $1,373 | $1,280 | $1,568 |
| Adjusted enrollment | $1,090 | $789 | $955 | $890 | $1,090 |
| Free school lunch counts | $660 | $478 | $578 | $539 | $660 |
| Elimination of cost of education factor | $758 | $758 | $758 | $758 | $758 |
| Current cost factor with 90%-110% bounds | $864 | $707 | $825 | $770 | $864 |
| Teacher salary index | $980 | $919 | $804 | $712 | $834 |
| General private-sector wage index | $947 | $855 | $832 | $678 | $762 |
| Fiscal capacity adjustment | $538 | $604 | $643 | $593 | $655 |
| Fiscal effort adjustment | $833 | $660 | $653 | $675 | $795 |

(continued)



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## APPENDIX B (Continued)

## Chapter 1 FY 1993 Allocations per Formula-Eligible Child for the Counties Containing the 10 Largest School Districts

| | Harris County (TX) | Wayne County (MI) | Broward County (FL) | Fairfax County (VA) | Dallas County (TX) |
|---|---|---|---|---|---|
| County poverty rate | 20% | 28% | 14% | 4% | 18% |
| Current formula | $670 | $899 | $755 | $645 | $670 |
| FORMULA ALTERNATIVES | | | | | |
| Raise Concentration Grant share to: | | | | | |
| 20% | $686 | $920 | $751 | $577 | $686 |
| 30% | $704 | $944 | $746 | $502 | $704 |
| 50% | $741 | $994 | $738 | $352 | $741 |
| 75% | $786 | $1054 | $726 | $163 | $786 |
| Raise Concentration Grant threshold to: | | | | | |
| 18% threshold | $681 | $913 | $764 | $645 | $681 |
| 25% threshold | $699 | $948 | $787 | $645 | $693 |
| Raise Concentration Grant threshold and share: | | | | | |
| 18% threshold, 50% share | $793 | $1064 | $784 | $352 | $793 |
| 25% threshold, 35% share | $811 | $1120 | $849 | $464 | $790 |
| Consistent treatment of percentage and number thresholds for Concentration Grants | | | | | |
| Count all students in eligible counties | $665 | $892 | $776 | $645 | $665 |
| Count only students over thresholds | $712 | $955 | $798 | $645 | $705 |
| Absorption formula with: | | | | | |
| 2% threshold | $737 | $988 | $860 | $820 | $737 |
| 4% threshold | $844 | $1,132 | $985 | $0 | $844 |
| 6% threshold | $982 | $1,317 | $1,146 | $0 | $982 |
| Weighted pupil formula with: | | | | | |
| 6% threshold/½ pupil weight | $785 | $1,053 | $916 | $874 | $785 |
| 10% threshold/½ pupil weight | $889 | $1,193 | $1,038 | $990 | $889 |
| 16% threshold/½ pupil weight | $1,050 | $1,409 | $1,226 | $1,169 | $1,050 |
| 18% threshold/½ pupil weight | $1,097 | $1,472 | $1,280 | $1,222 | $1,097 |
| Adjusted enrollment | $763 | $1,023 | $860 | $735 | $763 |
| Free school lunch counts | $462 | $620 | $539 | $458 | $462 |
| Eliminatation of cost of education factor | $758 | $758 | $732 | $657 | $758 |
| Current cost factor with 90%-110% bounds | $707 | $864 | $743 | $636 | $707 |
| Teacher salary index | $643 | $903 | $688 | $650 | $643 |
| General private-sector wage index | $762 | $824 | $654 | $634 | $762 |
| Fiscal capacity adjustment | $868 | $731 | $573 | $524 | $868 |
| Fiscal effort adjustment | $818 | $825 | $652 | $611 | $818 |

*NOTE: New York City is in five counties: Bronx, King, New York, Queens, and Richmond.

# APPENDIX C

## Number of Counties That Receive Chapter 1 FY 1993 Concentration Funds Under Number Threshold vs. Percentage Threshold

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### Number of Counties that Receive Chapter 1 FY 1993 Concentration Funds Under Number Threshold vs. Percentage Threshold

| | Number of Counties | | | Percent of Total Funds | |
|---|---|---|---|---|---|
| | Number Threshold | Percentage Threshold | No Concentration Funds | Number Threshold | Percentage Threshold |
| Current formula | 53 | 2,055 | 1,034 | 6% | 94% |
| FORMULA ALTERNATIVES | | | | | |
| Raise Concentration Grant threshold to: | | | | | |
| 18% threshold | 87 | 1,613 | 1,442 | 14% | 86% |
| 25% threshold | 138 | 819 | 2,185 | 46% | 54% |
| Raise Concentration Grant threshold and share: | | | | | |
| 18% threshold, 50% share | 87 | 1,613 | 1,442 | 14% | 86% |
| 25% threshold, 35% share | 138 | 819 | 2,185 | 46% | 54% |
| Apply consistent treatment of percentage and number thresholds for Concentration Grants | | | | | |
| Count all students in eligible counties | 53 | 2,055 | 1,034 | 11% | 89% |
| Count only students over thresholds | 150 | 1,958 | 1,034 | 77% | 23% |
| Adjusted enrollment | 39 | 2,056 | 1,047 | 5% | 95% |
| Free school lunch counts | 38 | 2,593 | 511 | 2% | 98% |

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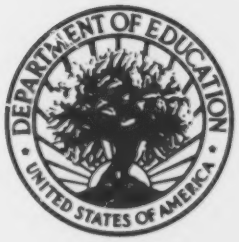


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